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A PHYSIOLOGIC APPROACH TO CARDIOVASCULAR ROENTGENOLOGY

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MY subject concerns the possibility of and the need for the roentgen study of the heart to be made in terms of pathologic physiology. I do not mean to deprecate the importance of anatomic diagnosis but rather to emphasize that since pathologic anatomy is only an end result of altered dynamics, much of our attention should be focussed on the disturbed physiology.

The function of the heart is to propel sufficient adequately oxygenated blood to the tissues and to handle it efficiently on its return. We are concerned therefore in the efficiency and adaptability of the heart in maintaining a proper pressure head and volume output. Pressure and volume are related through Starling's law[15] which states that, within certain limits, the volume output per beat is directly related to the diastolic size of the ventricle. To put it another way, the greater the initial pressure, which is a function of the length of the muscle fiber, the greater the pressure developed and therefore the larger the volume of blood ejected. This law comes into play when the venous return is augmented, when the ventricle is unable to empty as the result of increased pressure in its outflow artery, as well as when the ability of the myocardium to contract is impaired. Long continuance of an augmented contraction based on increased initial length leads to hypertrophy, which still permits efficient contraction until the elastic limits of the fibers are overstrained. Then the diastolic pressure begins to rise and, with further increments to diastolic filling, the output falls.

The atria probably do not follow this pattern. If, as is likely, they act like large veins[16] there will be a pressure level below that associated with clinical failure, at which a slight increase in pressure will cause a marked increase in volume.

The important factors in cardiac dynamics, therefore, are the pressures in the individual cardiac chambers, including details of their change during the cardiac cycle, the changes in the volumes of these chambers, and their output. As Cournand and his colleagues have shown,[7] pressures can be recorded in the right heart and femoral artery in humans, but this technique is not applicable to all patients. The ordinary x-ray examination tells us only about the over-all size of the heart, and this not too accurately because the upper and lower borders must be guessed and because the geometric shape varies unpredictably in different physiologic and pathologic conditions. Furthermore, the volume of individual chambers is not given quantitatively except in a condition like mitral stenosis where the left auricle is unusually dense. The only method which regularly demonstrates individual chambers is angiocardiography,[20] but this also is a procedure which cannot be applied universally.

Roentgenkymography, or more recently electrokymography, by recording cardiac pulsations affords modified data concerning volume change and, indirectly, pressure change.[11,18] This method is easily applied and, therefore, will be considered first, using the effects of respiration on cardiac dynamics as an illustration.

The pressure gradient between peripheral and central veins is an important factor in right

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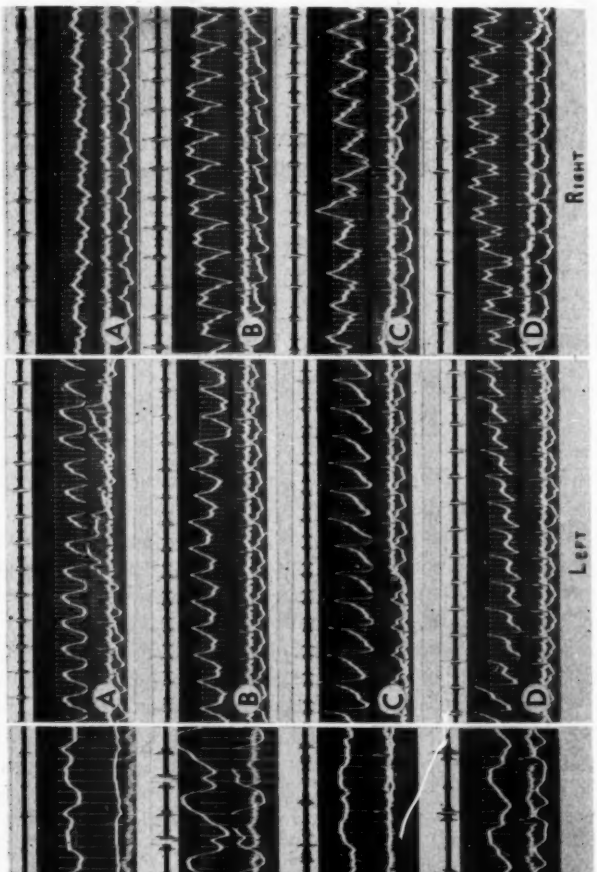

Fig. 1. Electrokymographic recordings of the pulsations of the left and right heart borders (postero-anterior view) in a normal hypersthenic man. Each record consists, from above down, of simultaneously recorded heart sounds, electrokymogram, electrocardiogram (distorted by 60-cycle interference) and apex beat. Camera speed, 50 cm. (A) Deep inspiration. (B) Deep expiration. (C) Valsalva experiment. (D) Mueller experiment.

Fig. 2. Electrokymographic recordings of the pulsations of the left and right heart borders (postero-anterior) in a hyperthyroid woman. Each record consists, from above down, of simultaneously recorded heart sounds, electrokymograph, electrocardiogram, apex beat. Camera speed, 25 cm. (A) Deep inspiration. (B) Deep expiration. (C) Valsalva. (D) Mueller.

atrial filling and, therefore, in the dynamics of the rest of the circulation. Since this pressure gradient can be affected by ordinary and exaggerated respiration, we have a simple method by which to change these conditions. For example, roentgenograms made during Valsalva and Mueller experiments may show a change of 20 per cent or more in the volume of the heart.

It has been shown by direct inspection of the heart in dogs, that the decrease in intrathoracic pressure that occurs with deep inspiration results in augmented right atrial filling,[2] and in right ventricular dilatation.[17] According to Starling's law, this produces an increase in right ventricular output. Lauson et al,[12] from intracardiac pressure recordings, made similar deductions in the human. They showed also that for a few beats there is a decrease in the left ventricular output in inspiration and an increase during expiration. However, they emphasize that this basic pattern can be varied by changes in the following: depth of respiration, relative duration of inspiration and expiration, respiratory rate, kind of respiration (abdominal or thoracic), pulmonary vascular capacity (as the result of disease or therapy), distensibility of the ventricles in diastole (as in pericardial disease), and venous return as in peripheral or central failure. While, as I noted, it is difficult to study the absolute volumes of the cardiac chambers in the human, the timing and the speed of volume change can be recorded during the cardiac cycle from the heart border. Morelli[14] carefully investigated this subject in 1939 using a concentric kymogram. The electrokymogram, however, permits a rather more precise analysis, particularly because other circulatory functions can be simultaneously recorded. At present we record heart sounds, electrocardiogram, electrokymogram and either the carotid or venous pulse, or the apex beat.

The electrokymogram, as described by Chamberlain and his group,[11] records the movement of the cardiac contour through a photocell. As the contour moves to and fro in front of the cell, the amount of light from the fluorescent screen and the current from the photocell vary proportionally. The current is amplified and activates a recording galvanometer. The final tracing is much like a pulse tracing. As the right or the left heart border moves towards the midline of the chest a downstroke is recorded. Similarly, movement away from the midline is recorded as an upstroke. Therefore, when systole occurs, the left border contracts towards the midline, more fluorescent light enters the photocell, and a downstroke is recorded.

The timing of the events of the cardiac cycle is obtained from one of the other recorded functions since these have been well known to physiologists and cardiologists for many years. The timing of systole can be taken from the first sound or from the carotid pulse. The preliminary vibrations of the first sound correspond to atrial systole; the first large component of the sound corresponds to isometric contraction; the second large component to ejection. In the case of the carotid pulse, a slight presystolic peak may be seen corresponding to atrial systole. The acute rise of the anacrotic limb corresponds to ventricular ejection. The semilunar valves close at the time of the second sound and the dicrotic notch of the carotid pulse. When the apex beat is satisfactorily recorded, or more regularly from the venous pulse, the rapid inflow phase of diastole is easily distinguished.

In general, the time relations of mechanical and electrical activity of the heart are not constantly correlated. However, when other activities are not well recorded, and this occurs frequently in experiments with respiration, the electrocardiogram may be the only available frame of reference.

The electrokymogram is analyzed therefore by determining when certain phases of the cardiac cycle have occurred, and deciding from the movement of the cardiac contour what is happening to the chamber that forms the contour at the point being investigated.

Case 1 was a normal hypersthenic man of fifty years. The left ventricular contraction is larger in expiration than in inspiration (Fig. 1). Exaggerated respiratory motions demonstrate profound alterations in ventricular ejection and filling. In the Valsalva experiment, which is forced expiration against a closed glottis, systolic contraction is much more rapid than in expiration. Diastolic expansion is slow and steady until presystole, when there is a sudden sharp filling. In the Mueller experiment (forced inspiration against a closed glottis) systolic contraction is very slow, and diastolic filling, after a fairly rapid start, progresses slowly to its presystolic maximum.

Lauson et al[12] made intracardiac pressure studies during the Valsalva and Mueller experi-

ments. Their evidence suggests that the strong compression of the thoracic contents produced during the Valsalva impedes venous return and, as a consequence, the right ventricular stroke volume decreases. After a short delay, the left ventricle follows suit. This will explain the slow diastolic filling of the left ventricle which is noted in Figure 1. The rapid systolic contraction is perhaps accounted for by a smaller systolic residue in the ventricle or by the lower pressure outside of the thorax than within it.

The Mueller experiment produces a marked fall in the intrathoracic pressure. Lauson et al[11] found here that there was a sharp drop in right atrial and right ventricular pressures. However, the net right ventricular pressure was increased, slowly returning to normal as the effort continued. This was taken to indicate increased output of the right ventricle and, therefore, after a few beats, of the left. Since the right atrial pressure in relation to the extrathoracic veins falls during the Mueller experiment, we can account for the steady diastolic filling of the left ventricle by this increased pressure gradient. The slow ventricular contraction on the left side is more difficult to understand unless there is a larger systolic residue and therefore a greater initial pressure. Perhaps also there are changes in the activity of the vasomotor centers during this experiment which alter the systolic pressure and secondarily the ventricular pressure.

Recording of the right heart border during the Mueller experiment shows a very rapid filling of the atrium during ventricular systole (Fig. 1).

The influence of heart rate, and therefore of the duration of the cardiac cycle, was studied in a patient with hyperthyroidism and a heart rate of 120 beats per minute. Intracardiac pressure recordings,[12] suggest that the duration of diastole may be of some importance in determining the mode of filling of the left heart. In our present case (Fig. 2), diastole was shortened to 0.30 seconds. During the Mueller experiment, the right atrial filling occurred rapidly and steadily from shortly after the onset of ventricular systole until the atrioventricular valves opened. Atrial systole is well defined; however, during the Valsalva when the right heart pressure is low, atrial systole is barely recorded. In both experiments, nevertheless, as well as in deep expiration, atrial movements are of large amplitude, which is probably to be related to the shortened diastole.

The contractions of the left ventricle are much like those in Case 1. However, rapid systolic ejection in both Valsalva and Mueller experiments is noted. In all likelihood a large systolic residue cannot accumulate in the ventricle during the Mueller experiment in this case because of the rapid heart rate. The rather remarkable difference in the shape of the ejection curve under these conditions is of great interest. I suggest that the apparent expansion of the ventricle in late systole during the Mueller might be due to the decreased pressure in the intrathoracic vascular structures as compared with the arteries outside of the thorax, since, while the semilunar valves are open, they are in free communication with the aorta and left ventricle. However, such explanations are mere speculations until, as we intend, simultaneous pressure recordings are made. I regret that space does not permit an elaboration of the clinical use of this technique. For simplicity, I have omitted from discussion the effect of the wringing motion of the heart during contraction, the side-to-side motion and the pull of the base towards the apex.

I shall pass on now to another interesting type of problem. After an arteriovenous aneurysm has been corrected or an acute anemia treated, the heart rapidly becomes smaller. This difference in size cannot be accounted for by a change in the stroke output alone. Fahr and Buehler computed[9] from observations on a heart-lung preparation that there would be an increase of about 125 c.c. in the diastolic volume of a normal human heart (assumed 600 c.c.) when the stroke output was increased fourfold. This corresponded to an increase of 7 mm. in the transverse diameter, whereas I have shown you differences of at least 11 mm. in one instance and 24 mm. in the other, in diseases in which the stroke output was at most doubled.

To explain this discrepancy, Nylin[13] postulated a change in the systolic residue in the heart. Cournand[5] showed that normally there is a systolic residue in the left ventricle through pressure recordings made during an extrasystole. These showed that although contraction occurred before filling could have taken place from the atrium, there was an ejection of blood from the left ventricle. Angiocardiography shows clearly that there is residual diodrast in the right ventricle at the end of systole and a smaller amount ordinarily in the left. This can be seen both

from the exposures made at the end of systole (Fig. 3) and from a motion picture following the course of diodrast through the heart.* Chavez et al[3] recently agreed that the right ventricle as well as simultaneously in the femoral artery. The catheter is passed under fluoroscopic control by the roentgenologist. Pressure recordings are made and blood samples taken for oxygen con-

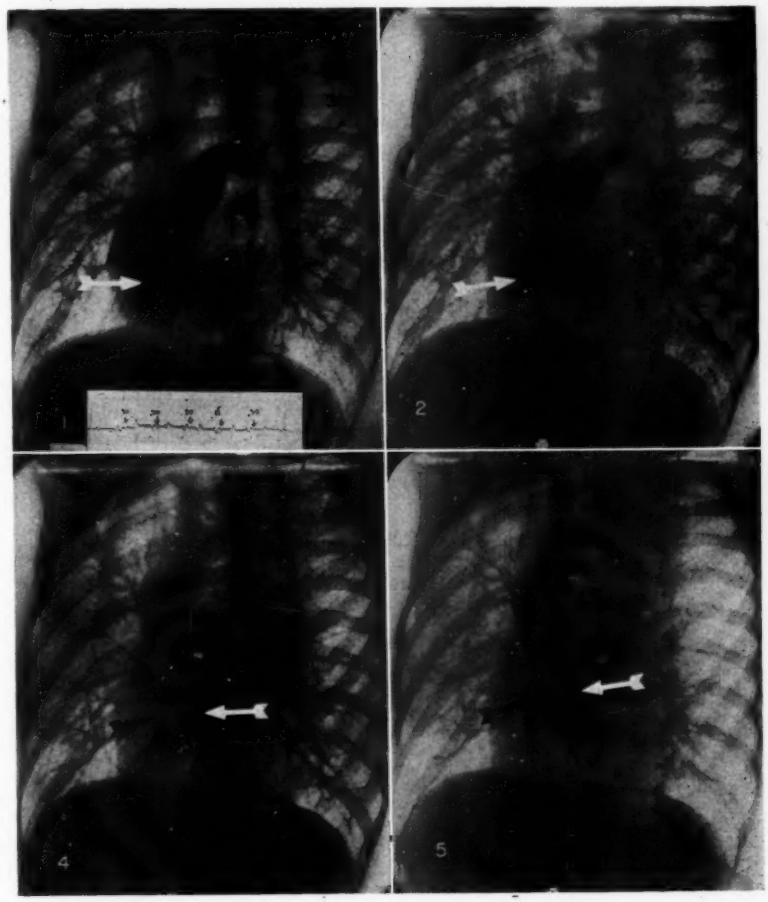

Fig. 3. Systolic residue. No. 1 and No. 2 show the residual diodrast in the right ventricle at the end of systole; No. 4 and No. 5 show the left ventricular residue. The exposures were controlled through an electrocardiographic lead (illustrated in No. 1).

does not empty completely in systole. They show films suggesting that the left does, but I am inclined to attribute this to a difference in technique, such as an unintended Valsalva experiment.

A discussion of systolic residues immediately leads us back to the problem of pressures, the importance of which I have repeatedly emphasized. Pressure recordings can be made in the right auricle, right ventricle and pulmonary artery tent analysis at various points in each chamber. The oxygen content, along with the oxygen consumption, permits a calculation of the average stoke output.

When pressure determinations can be correlated with volume measurements, a maximum of information is available. For this reason, and also because of the anatomic data which is made available, angiocardiography also is employed. In the following cases, therefore, the results of such a correlation are presented. However, since we have only recently begun to catheterize the

*The motion picture mentioned was shown after the presentation of this paper at the state meeting.

heart, while we have performed over one thousand angiocardiographies during the past few years, I have not hesitated to draw freely from the literature for the pressure data.

the apex was pointed normally.[19] Sometimes the right ventricle appeared compressed by the large left ventricle (Fig. 5). However, it is anticipated that right ventricular dilatation and hypertrophy

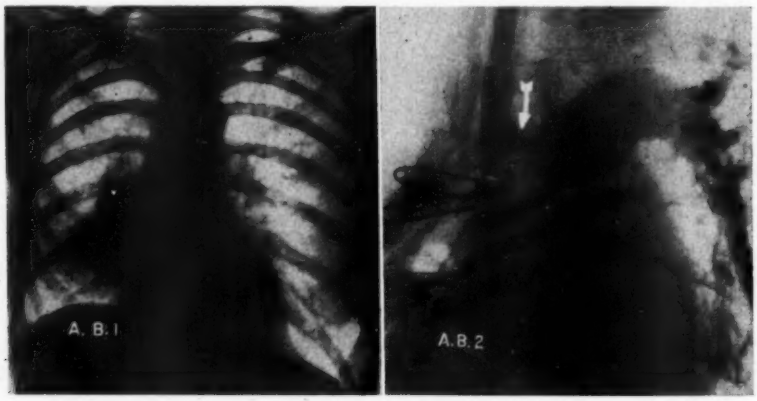

Fig. 4. (*Left*) Carcinoma of the right lower lobe bronchus (AB1). (*Right*) Angiocardiogram after right pneumonectomy. Arrow points to stump of right pulmonary artery. The left pulmonary artery and its branches are not significantly dilated.

Postpneumonectomy

The capacity of the pulmonary vascular bed is great. Removal of one lung so that the entire blood flow is through the remaining lung has very little effect upon right ventricular pressure because there is no change in vascular resistance. Cournand[6] also found the blood flow normal. The systolic pressure in the right ventricle was slightly elevated in one of his cases where there was a coincident chronic emphysema. The overall size of the heart remains normal, and the right ventricle, by angiocardiography, is normal in size (Fig. 4). The pulmonary artery, the remaining main branch and its smaller branches are not enlarged, the preservation of normal pressure-flow relations probably being maintained by an increase in the number and, to a slight extent, the size of the capillaries in the remaining lung.

Patent Ductus Arteriosus

In spite of the increased pulmonary flow in this condition, Dexter and Burwell[8] found the mean pressure in the pulmonary artery to be normal even when, in one case, the shunt through the ductus was estimated to be eight liters per minute. We have performed angiocardiography in about eighty cases of this condition, and the right ventricle regularly was normal in size; the serration of the trabeculae was unchanged, and will be found if the pressure in the pulmonary artery rises, as was found in one case by Cournand (55/39 mm. mercury, as against a normal of 25/8).

Chronic Pulmonary Disease

In four cases of emphysema with a moderate increase in residual air, Cournand[6] found normal pressures in the right ventricle. In four cases with a larger residual air, the systolic pressure was elevated. In both of these situations, the heart was not definitely enlarged. However, when right heart failure was present, and this is defined by Cournand as occurring when there is diastolic as well as systolic hypertension, dilatation was found regularly. This experience is comparable to our findings with angiocardiography, with this addition. Angiocardiography has shown how difficult it is to determine the size of the right ventricle by ordinary x-ray means.[8] The first changes take place in the position and direction of the interventricular septum. The apex of the right ventricle is rounded instead of pointed. These changes are wholly undetectable by cardiac measurement or by inspection of the cardiac contours. When enlargement of the heart occurs, it is found to the left. However, the pulmonary artery is usually dilated, and this is demonstrated in the conventional roentgenogram.

When there is diastolic hypertension in the right ventricle, the mean right atrial pressure is elevated and this chamber enlarges. It is then that frank cardiac enlargement to the right is noted.

Eisenmenger Complex

This case is presented to demonstrate the integrated type of examination that can now be made. In this case, a girl of twenty-two, moderately cyanotic and with progressive impairment of cardiac reserve, the mean right ventricular pressure was 22 mm. mercury. The right atrial pressure also was substantially elevated. The pulmonary artery could not be catheterized but the pressure was undoubtedly high because pulsations were very active fluoroscopically and, when recorded, suggested pulmonary insufficiency. Angiocardiography showed considerable dilatation of the right auricle and right ventricle (Fig. 6). A shunt of diodrast from the right ventricle into the aorta clearly is present but most of the diodrast passed into the dilated pulmonary artery. This accounts for the high oxygen saturation of arterial blood that was found (82 per cent). In spite of moderate cyanosis and increasing impairment of cardiac reserve, this was not a case for the Blalock-Taussig operation.

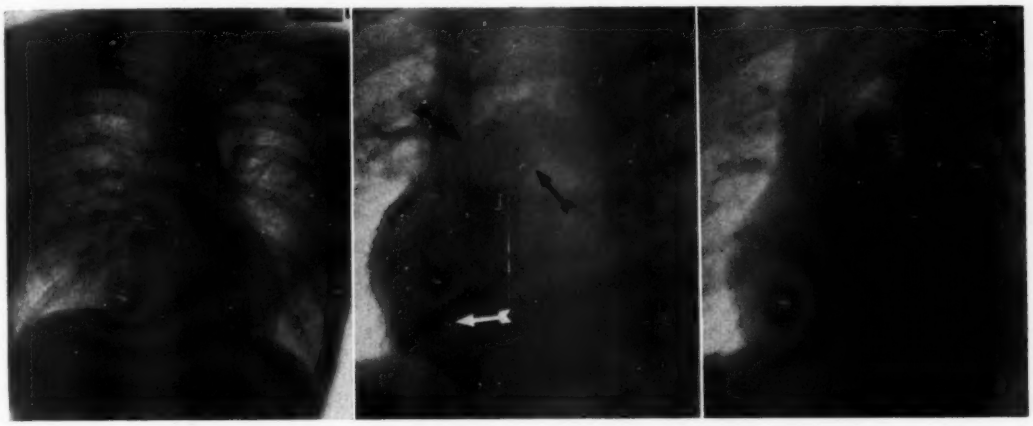

Fig. 5. Patent ductus arteriosus. Angiocardiograms made in left oblique position. (*Center*) White arrow points to left border of compressed right ventricle which is otherwise normal in size. Pulmonary artery (two black arrows) is not dilated. (*Right*) Black arrow indicates right border of very much dilated left ventricle.

Mitral Disease

We have been impressed with the finding, by angiocardiography, that the right ventricle is not grossly dilated in cases of mitral disease even when the heart is quite large.[10] The right ventricle on the other hand has been found displaced anteriorly, the pulmonary artery anteriorly and cephalad, by the large left auricle. The straightened, elongated middle left cardiac contour is due chiefly to the left auricle and not, as some have thought, to a dilated elongated pulmonary conus. It is apparent from angiocardiographic analysis, that it is very difficult or impossible to determine the size of the right ventricle in the usual case of mitral disease by ordinary roentgen means. The explanation for this is to be found in a report by Bloomfield et al.[1] In a case of rheumatic heart disease, they found a normal diastolic pressure in the right ventricle as long as the patient was not in failure. A systolic hypertension of 57 mm. mercury was present, but I have already indicated that significant ventricular dilatation does not take place until the diastolic pressure rises. The same patient when in failure revealed pressures of 103/29 in the right ventricle. It is these pressure changes that account for the marked change in the size of the heart that is found when a patient with mitral disease passes in and out of failure.

Summary

I have very briefly touched on some of the phases of cardiac roentgenology which have interested me. I selected for presentation particularly those facets of cardiovascular physiology in which the roentgen ray can play an important role. It has been my intention to provoke consideration of these thoughts:

1. It is no longer necessary for roentgenology

to confine itself to a questionable static analysis of cardiac topography.

2. The roentgenologist has a tool which is particularly suited to a physiological approach to cardiac dynamics. However, his participation in a team will permit an integrated study which cannot be achieved by one individual alone.

3. Newer techniques permit the study of the individual and his cardiac function. This is the fundamental development in clinical physiology. Reliance on prototypes in the postmortem room or on the experimental animal has become less necessary than heretofore.

In the preface to his book, Dr. Carmen said, "Opposing views have been considered with fairness and without conscious implication that the statements herein recorded should be considered final. Because of the lessons they may teach, mistakes have been recorded unsparingly, but these errors should not be regarded as reflecting on the efficiency of roentgen diagnosis in general."

Clearly if we follow Dr. Carman's precepts, knowledge must advance.

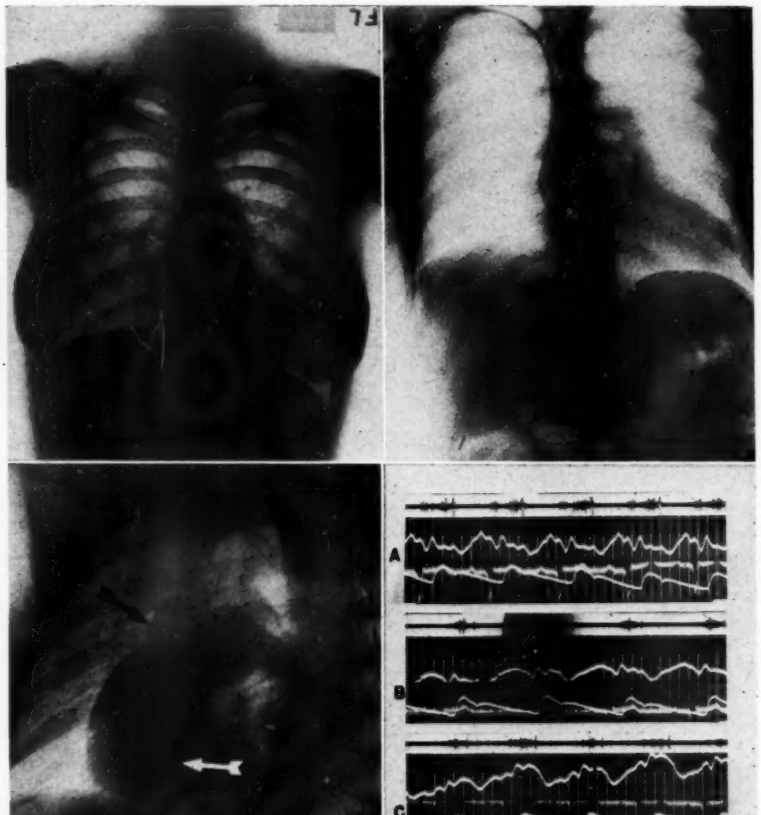

Fig. 6. Eisenmenger Complex. (*Above, left*) Conventional roentgenogram shows heart enlarged to the left, with the pulmonary artery segment convex. (*Above, right*) A catheter was passed into the right ventricle but could not be passed into the pulmonary artery. (*Below, left*) Angiocardiogram shows enlarged right ventricle (white arrow) and a dilated pulmonary artery. Diodrast enters the aorta from the right ventricle (black arrow). (*Below, right*) Electrokymogram of the left ventricular pulsations during a Valsalva experiment showed a lateral movement 0.06 seconds after the onset of ventricular ejection.

Credit is accorded to the teams with which I have worked in obtaining the data I have presented: Dr.

(Continued on Page 1081)

THE PLAN OF ACTION FOR FARM COMMUNITIES

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IN any discussion of rural health problems, one is reminded of the ancient recipe for rabbit stew, which began, "First you must catch the rabbit." In this case, the rabbit is public opinion, and perhaps the most important step in a series of steps looking toward improvement of rural health conditions is an awakening of the residents of a given community and an awareness of the problems that exist.

Next in order would be a meeting of interested people. Farm organizations, extension service, civic clubs, school authorities, church representatives and the nursing profession should meet with their county medical and dental societies and public health departments, and plan programs designed to answer three pressing questions: "How shall the sick be helped?" "How shall the doctor, dentist, nurse and hospital be paid?" and lastly, "What can we do in an educational campaign to institute preventive measures that will lead to better health?"

The result of such consultation should lead to a general survey of the rural community. The number of doctors and nurses, hospital facilities, condition of the roads, and the average income of the farm people to be served must be ascertained before intelligent planning can be assured.

When the exact report has been compiled, the entire community through its local leadership should be urged to focus general attention upon the findings. Through organization meetings, radio, press and pulpit, people can be informed of the true conditions and urged to assume responsibility in a program that will ultimately effect the much needed changes.

Read at the Rural Health Conference at the annual meeting of the Minnesota State Medical Association, Duluth, Minnesota, July 2, 1947.

It is most likely that it will be found that there are existing agencies available that are not being used. Perhaps there is duplication of effort in some lines and co-ordination is needed. It is highly possible that a little well directed team work can bring Federal and State assistance of funds and personnel to the aid of local health workers, with remarkable results.

Communities should be made to see that they can well tax themselves to provide better facilities. A campaign of health education designed to explain and extend prepayment plans for medical care and hospital service will do much to disseminate authentic information on this comparatively new and less well-known method of paying some of the bills. Promising students should be assisted in preparation for medicine and nursing through scholarships. Farm organizations and the county medical societies may well plan workshops or discussion groups to carry forward and perfect the definite programs suggested by the surveys and "arousement" preliminaries.

America has her greatest stake in a healthful citizenry. Her economic and cultural advancement as well as her military strength for national defense are inextricably woven together. Today, we must meet this great challenge with the best we have and solve the problem by application of the time-honored American doctrines of self-help and individual responsibility. We can no longer say there is no problem and dismiss it with a shrug of indifference. If we do not present a positive approach and apply what we know and what we have, there are those among us who, restless and discontented, will seek to fasten upon us a system of regimentation and compulsion entirely foreign to American ideas and ideals. The stake is tremendous. We dare not fail.

A SOUND PUBLIC HEALTH PROGRAM

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RURAL or farm community health is to be achieved only by interested active sharing in objectives and methods entered into heartily by the three parties primarily concerned. These are, in order of importance, the individuals or families of the community, the physicians and dentists in private practice, and the health department of the local government.

Health is a personal achievement, built upon good inheritance, upon an understanding of the laws of living matter, reproduction, nutrition and growth, that is, the principles of human biology, and such control of environment and human relationships in work and play as will reduce or avoid preventable disease.

Without the enlightened and eager self-interest of parents and children, employes, teachers, ministers, editors and all and sundry persons and households of the community in attaining a way of life that is consistent with good health, neither the professions nor officers of local government can create, maintain or improve the state of health of village, town or country.

There are no visible limits to the betterment of health, the enrichment of life, the completeness of the span of human survival, and the depth, breadth and happiness of life, if all we now know of the prevention of disease and the development and promotion of health at all ages is applied, with courage, determination and personal and social unselfishness by people, doctors and their local government.

Health is largely the result, the payoff, the reward, of a quality in persons and their way of life.

No one of the great accomplishments of the past hundred years, this recent century of sanitation, the golden period of the sciences and arts of human existence, would have been possible without the trust of people in their family physicians and the personal influence of these doctors of our nation in the households of our land. Their necessary role in carrying preventive medicine to every patient and family is ever more and more indispensable in the translation of the facts of laboratory and hospital, of medical school and research institution into practical application in homes, shops, farms and public policies.

Why then must we have the participation of local government when we admit the prior importance of the people themselves and their medical and dental advisers?

Because there are some services which can be offered at less expense and with more effect by government than if left to private initiative and individual conscience.

You ask me to describe a sound public health program with special respect to rural or farm community existence.

Let us at once define what we mean by public health services. These consist of the application of the sciences and arts of preventive medicine, by or with the consent of government, in the interest of the community, as distinct from medical services for the individual's personal benefit.

There are four recognized levels of government at which health services are conducted. The international, the national (federal or dominion), the state or province or department, and the local level, that is, the village, town, city, county or multiples of these within the frame of a local or district government.

We cannot separate ourselves from concern with the somewhat remote functions of the World Health Organization or with the duties of national health agencies, for without their protection, hazards from other lands and lack of central authority in commerce and transportation would certainly deprive us of much of our present health security. But they do not reach into our homes or provide persons to protect our water, milk and food supplies, or supervise the sanitation of our villages. At the state level we touch closely upon services that may be, and in Minnesota always have been, about as intimate and personal as are those of the local department of health. In fact, in most of the area of your state and for at least one-third of your population, the state department of health has been the only source of protective health services, outside of the four large cities.

Read at the Rural Health Conference at the annual meeting of the Minnesota State Medical Association, Duluth, Minnesota, July 2, 1947.

But be it always remembered that state, national and international health services and programs can be but partial and largely theoretical unless built upon a structure that brings basic essential health services to every household, through the agents of the public health professions serving each respective community, be it town, county, city or village.

Let us then picture for our immediate goal as a function of every local government, whether separately or in conjunction with adjacent communities within the county, the simplest, most elementary, economical but efficient services for health required to make use of the abundant facts of present day medical knowledge.

It is a privilege enjoyed under your laws for every unit of local government to establish a board and department of health. In all common sense this privilege should be seized upon as an obligation, a duty of every local jurisdiction of government that levies taxes and disposes of such revenue in the public interest. County and lesser units of local government in Minnesota have taken their responsibilities too lightly in this respect, and there are literally hundreds of local health departments unworthy of the name and but mere gestures, serving no useful purpose. It is inevitable that this should be so under the loose and inadequate provisions of state law which do not now facilitate the joint action of small communities and sparsely settled counties to combine for the common purpose of health departments.

I share with all physicians of your state, and with many other citizens of good will and public spirit, a deep chagrin and mortification that your recent legislature allowed a petty political obstruction to frustrate the evident demand of the people for an enabling act permitting the creation of city-county, county-wide and multi-county health departments for efficient public health service at the local level.

But to come back to the substance of the matter. Of what does a sound public health program consist? Certainly it does not include medical care of sickness. It does not invade the recognized field, the traditional and accepted sphere of private initiative and personal relation of family and family physician. A public health program must be conceived in view of four administrative principles. There must be authority under the law for the performance of certain functions; there must be responsibility vested in a professionally qualified medical officer of health appointed by elected officials of local jurisdiction; there must be tax funds authorized and appropriated to carry out the health services; and the health officer must be free to select and employ such professional, technical and assistant personnel within the specification of civil service requirements as may be necessary for the work to be undertaken.

Authority, responsibility, tax money, personnel—these must be assumed if we are to venture upon a service so vital, so indispensable to living and a high level of health.

The basic functions of the local health department are six in number, each long tested and each of proved worth, and each so related to the others as to make a consistent and efficient administrative whole. These six functions are:

1. The accounting for all births, deaths and notifiable diseases, occurring within the local jurisdiction: the vital statistics or human family bookkeeping. This requires verification of each record for completeness and accuracy, the tabulation, analysis, interpretation and publication of the facts to be used as a basis for education, for public policy, for health accounting to the local public.

2. Control of communicable diseases by the use of education, persuasion, and, if necessary, the authority for sanitary law. There is the provision of specific protective immunity to those not so served by the family physician, and of such treatment of infected persons as will shorten the period of communicability of a disease. These services, guided by epidemiological intelligence and resourcefulness, everywhere produce calculable and usually brilliant results.

3. Environmental sanitation including protection of water, milk, foods, and especially the guardianship of all employed persons against any health hazards of their occupation. The control of insects and animal pests capable of communicating or causing disease in humans is included under this part—the sanitary engineering control of man's environment on the material, as distinct from the social or physical, phases of his life. Housing occupancy, as distinct from housing construction, falls within the scope of sanitation also. The measure of success in this function of a local health department is, as is the case in many of the others, the amount of

educational persuasion, rather than the extent of police power or sanitary authority that is used to obtain compliance. The best health services are those that keep the big stick of authority hidden, while teaching has full play to obtain a willing and interested co-operation.

4. The public health laboratory is the servant of the sanitarian, the epidemiologist, the health educator, the health officer within the department of health, and, even more, the collaborator and assistant of the physician, the veterinarian, the dairyman, the food processor and purveyor. The laboratory gives exactness, promptness, decision and irrefutable proof of conditions in persons and in environments that hazard health.

These four functions carry on the earliest basic conceptions of public health service and are supported by long established legal sanctions, supported by the highest courts.

The next two functions involve only educational methods and express the most modern concepts of the role of civil government as the people's friend and counsellor, rather than their master.

5. Only since 1912 have local health departments had bureaus or divisions of maternity, infant and child hygiene, including concern with the health protection of school children. This function, perhaps, in its scope and bearing upon human happiness and survival is the most far-reaching and necessary of all the duties of a health department and might well be thought of as concerned with human reproduction, replacement, growth and development, the whole field of the succession of the generations, the quality and quantity of our offspring, with genetics and eugenics, with inheritance and the up-bringing of children within the family. From the pre-marital state of oncoming youth, through the period of the expectant mother, the dangerous days of early infancy, the delightful personality and exuberance of the runabout, the preschool child, and through the baffling years of adolescence, through high school and into college or employment, the health department stands as a sort of proxy parent to guide, guard and assist in the achievement of maturity with the least possible number of handicaps to the body, mind and spirit of the child. Truly the very principle of human biology, if it becomes part of the way of good life in home and community.

6. And then latest, as a member of the public health family, is the function of health information, instruction and education in all its infinite variety.

Health education is a life-long experience, a sort of biological philosophy, the very essence of common sense. It has always been a function of the family physician. It is the particular province of the visiting and public health nurse. It is a major concern of every member of every department of health from local to international. It is an art that carries the word of science.

No thought of force or compulsion, no threat of authority or law can be tolerated in the relationship between the mother with her children and the public health nurse who is the very embodiment of a traveling encyclopedia of hygiene. Whatever the information sought by the public or specially promoted by the health department in the public interest, the method must be that of the educator who speaks with authority in the field of human health.

These six, then, are the basic, minimum functions of a local health department: vital statistics; communicable disease control; environmental sanitation; public health laboratory; maternity, infant and child hygiene; health education.

If I did not believe each of these to be a proven need for my fellow citizens and a proper and authorized duty of local government to provide, I should not have come so far from my home by the sea to persuade you physicians and you parents of Minnesota to organize your professional and public influence and opinion to the effect that no village, town or county of your state lacks these. We have had these services in New York City since 1865.

Full-time, trained professional medical leadership for such health services is as essential as a lawyer on the bench, an engineer in charge of your highways, an educator at the head of your schools.

Part-time physicians, private practitioners, can no longer play safely the part of local health officers. They should not be asked to.

Of Minnesota's 2,714 counties and cities, villages and townships permitted to set up each a local health department, only 821 of the 1,881 townships had a health officer. Most of the local health officers of Minnesota are on a part-time or fee-for-service basis. Not more than one-fifth of the local health departments in Minnesota,

of which there are some 1,635, even report the pay of the health officer.

This is an inexcusably loose and inadequate provision for local health service, for which the remedy was sought at the last legislature.

The chief errors which have developed unnoticed over the recent decades are:

1. Local governmental jurisdictions are too small to support a competent staff to carry out the necessary functions of a local health department.
2. Appointment as health officers of part-time practitioners of medicine and surgery, whose time and interest are fully engaged in caring for the sick.
3. A small penuriousness of local government, which in the main makes wholly insufficient appropriations for human life-saving.

The necessary steps to make Minnesota lead the states in eradication of tuberculosis and syphilis and maintain its distinction in local health worthy of its great university schools of medicine and public health and of its distinguished state health department are as follows:

1. Secure passage of the enabling act for creation of consolidated local health units of suitable size.
2. Impress elected officers of local government with their duty to appropriate sufficient tax funds to support at least the minimum basic local health services under trained medical direction.
3. Make certain that no less than one public health nurse is employed for each 5,000 population for administrative and educational services. One for each 2,500 of population will be needed if they are to be required to give bedside care of the sick in the home.
4. Give the local health officer authority to employ other professional and technical personnel as the population may require.

You will have noted, and perhaps with surprise and disappointment, that I have made no reference to the relation of the local health officer to the administration of hospital, outpatient or home medical care services for the sick. Your laws may put the burden upon him, but I assure you that the program of public health I have outlined will require all the ability and time of a trained health officer and that community health will suffer if his talents are devoted to management of medical care programs for the sick.

It is proper to have the state department of health charged with its present and expanding functions in the interest of more and better hospital care, but care of the sick is not a proper function of the local health officer.

Every local jurisdiction of size to justify a full-time health department should have a professional and citizens' health council to serve as a forum, a sort of public conscience and planning body to back up the public health program. One further omission I have been guilty of intentionally. I have not advised that in the establishment of local health units and implementing their half-dozen essential functions there be undertaken clinic services for the aged, for heart disease, for diabetics, for the mentally ill, for multiple sclerosis, for cerebral palsy, for epilepsy, for Hodgkins' disease, for cancer, or for arteriosclerotic and hypertensive patients.

Only so far as the state of medical knowledge offers any sound facts which can be safely and honestly passed on to the general public through educational publicity, can local health departments participate in the prevention of these many serious human ills.

Medical institutions for diagnosis and treatment and research establishments to study origins and causes of chronic, long-time disabilities have the present responsibility with respect to these diseases as causes of individual sickness.

We are deeply ignorant of facts upon which programs of prevention can be based.

Let us, through our health departments, persuade people to obtain competent medical and surgical advice, as the best means of safeguarding their health by periodic health examinations. If they are, in fact, unable to meet the cost of such examination, it is certain that medical institutions and organizations will find ways of providing it.

The health department is not the agent of government or the community which should be charged with establishing clinical facilities for diagnosis and treatment of the sick, unless the sickness of the individual threatens communication to others.

The public health council, the local medical society, the health officer and his staff should be the agencies to discover and correct preventable causes of ill health and create the public spirit of co-operation among all elements of the population

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THE HEALTH PROGRAM IN RURAL SCHOOLS

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IT is axiomatic that in a democracy such as ours the rural school child *should* enjoy equal opportunities with the urban school child so far as the protection and improvement of his health is concerned. When we look at the record, however, we find this is not the case. Health examinations of rural school children are too often omitted or only hurriedly done; arrangements for following up remediable defects and utilizing all community resources to bring about correction are too often lacking; heating, lighting, ventilating and cleaning facilities in the rural school are too often inadequate, and planned and progressive health teaching too rare.

Correlated with these inadequacies (but probably not the direct result of them), we find that though rural and urban children start life with about the same number of remediable physical defects, urban children manage to get many more of their defects remedied during their school life than do rural children. We also find that the health habits of rural children, particularly in respect to matters of diet, dental care, and communicable disease control, are generally inferior to those of urban children.

While fresh air, sunshine and physical activity are health boons almost automatically afforded rural children, they do not of themselves guarantee a high level of health or physical fitness, nor should their presence be accepted as a reason for excusing an inadequate health program in the rural home, school, or community. If a good home-school health program can be added to what rural children already have in the way of health-promoting factors, our rural population should make rapid strides in improving efficiency, productivity and contentment.

The Basic Problem

The basic problem is created by the wide dispersal of rural children in the thousands of one-room schools. Consolidation of these one-room schools would of course simplify this problem in many respects, but such consolidation is a long and often painful procedure, and the successful efforts of Grout, Lamkin, Greenleaf, Drenckhahn, VanSlyke and many others are proof of the fact that much can be done to improve the health programs in our rural schools without waiting for consolidation.

With perhaps several hundred one-room rural schools scattered through a typical county it is easy to see that the county superintendent of schools will have very limited opportunity to provide guidance and supervision to the individual teacher attempting to carry on an effective school health program. It is just as obvious that the rural teacher with pupils in perhaps all eight grades, and with the whole category of responsibilities extending from planning the school day to supervising the recess period, is not going to have very much time to study the health needs of her pupils and of the community or to collect interesting new health-teaching materials or to make home visits to discuss pupil health problems with the parents.

Some Needed Assistance

If adequate school health programs are to be provided county wide, then it is apparent that the overburdened teachers and county superintendents must be given assistance. That assistance may well consist first of a well trained health education supervisor or health co-ordinator. This worker will bring new teaching materials to the rural teachers, work with them to develop teaching units that will be suited to the needs of the children and adaptable to the limited resources of the one-room school, and give needed assistance in the maintenance of a hygienic and sanitary school room.

Another form of assistance which should be made immediately available to this overworked team of county superintendent and rural teacher is the limited service of a physician and nurse. It is difficult enough for the mother of a family to be responsible for the health of her small children in the isolation of a farm home. She usually has the father with whom to share the responsibility and she knows that in real difficulty she can usually find her family doctor at the other

Read at the Rural Health Conference at the annual meeting of the Minnesota State Medical Association, Duluth, Minnesota, July 2, 1947.

end of the telephone line. But to ask the teacher to be responsible for the health of twenty to thirty of other people's children, and without a school physician for consultation and advice, is both unfair and unwise.

If the pupils of a school are receiving their necessary immunizations and health examinations in the hands of their family physician, I would be the last to recommend setting up a scheme of health examinations in the local school. But even in the ideal situation where the family doctor is providing periodic health examination, it would seem to me that there is still need for a regularly appointed school physician to whom the teacher may turn for advice and counsel in such matters as suspected communicable disease, growth and development problems and behavior problems. Whether such health service is provided by educational authorities or by local public health authorities is less important than that it somehow be provided. Similarly, it can be said of nursing service that somehow it must be made available to assist the one-room rural schoolteacher. But because of the distances between schools, and the close connection between disease or infestation of the school child and disease or infestation in the home, it would seem particularly desirable that the nursing service to these rural schools be provided by the local public health nurses who are authorized and equipped not only to work with the child but to carry the work back into the farm home. Upon the request of the teacher, the public health nurse may visit a rural school and, acting upon standing orders written by the health officer under whose direction she works, not only eliminate the pediculosis in the school child but also go back into the home and eliminate the family infestation.

The School Physician

In those rural areas where periodic health examinations are rarely done by the family physician, the need for the school physician is even more urgent. He should not, however, be hired either by the local school or by the local health department just to come in once a year, give every child a rapid examination and then depart with the feeling that "at least that routine job is done for another year." Figures show that school children are at the healthiest period of their lives; in most instances, health examinations done every three years will be adequate, provided parents and teachers are alert to refer the child to the physician when signs of acute illness or handicapping defect appear between examinations. The school physician can therefore make the best use of his time in the school if he gives first priority to those children culled out and referred by the teacher, second priority to health examination of those entering the first grade, those entering fourth grade, and those entering seventh grade. The physician serving the school must be responsible for establishing professional standards for the health examination, and he should refuse to participate in a school health program which lines the children up and parades them by the examining physician so rapidly that he "rarely sees the boy or girl back of the throat." Not more than three or four health examinations should be scheduled per hour, and the time-consuming health history, vision testing, hearing testing, and weighing and measuring should already have been recorded by the teacher and parent with the guidance and assistance of the nurse. The advice which the physician gives the child, and the parent if he is present, at the completion of the examination, is of the greatest importance, first because it is based upon the specific needs of that child, second because it carries the authority of the medical profession behind it. If time is not taken for this summary and advice, the physician is failing to utilize his chief opportunity for health education.

The Teacher

The rôle of the teacher in a one-room rural school is admittedly a difficult one, and what is expected of her is frequently far beyond what any one person can accomplish. It is nevertheless true that in almost every county in this country there are rural one-room schools that can be pointed to with pride by the county superintendent as schools in which health is both taught and practiced. The atmosphere of the classroom is cheerful and bright; each child feels that his individual needs and desires are being given consideration; physical activity alternates with mental activity; health practices jibe with health instruction; health instruction is planned and progressive, and deals with problems that are found in the local school, home, or community; the morning health review is carefully and consistently done; the teacher is thoroughly aware of all of the com-

munity's resources for recreation, for remedying defects, for making adjustment to severe handicaps.

In order to bring about such a happy situation it may be presumed that the teacher should have had in her training days courses in child growth and development and in the hygiene of the school child. Most often she has had none. Summer school courses, teachers' institutes and health work shops may have helped many of such teachers but the majority of successful school health programs appear to be largely the result of the teacher's individual interest and effort. With the whole community and its health needs to study, with modern textbooks as tools and with the help of *Hygeia* bringing its monthly contribution of new health facts, every teacher can, if she has the interest and energy, provide an effective if not all-inclusive school health program.

Conclusions

1. Though the rural school child as well as the city child needs and is entitled to an effective program of health education, health protection and health promotion, in many instances he is not getting it.

2. Generally effective school health programs in rural areas may have to await consolidation of rural schools.

3. The three chief assisting services that can be given rural teachers and county superintendents are those of a health co-ordinator, those of a school physician, and those of a public health nurse.

4. Every school should have a physician on call but his time in the school should not be frittered away in doing annual examinations in a superficial way.

5. The school physician by limiting routine examining to every three years will have time to study problem children selected by the teacher and to offer valuable personal advice upon completion of the examination.

6. Some teachers in isolated schools manage to provide effective health programs. Many more could do so if they were interested, encouraged and assisted.

7. Medicine now has a tremendous volume of knowledge as to how to prevent, modify or cure disease. Much of this knowledge is useless unless it is in the minds of the general public. The schools offer the ideal means of putting important health facts at the disposal of the public. It is therefore of vital interest to the medical profession and all those interested in human welfare that our school health programs, both rural and urban, function smoothly and effectively.

HYPERTENSION

Of first priority on the list of causes of physical disability is hypertension, or hypertensive cardiovascular-renal disease. This is not primarily a vascular disease but a definite syndrome caused by kidney dysfunction. It manifests itself in hypertension, cardiac hypertrophy, secondary degenerative changes in the kidney itself due to the circulatory changes, and degenerative changes in other organs, including the brain. Malignant hypertension is merely a severe and terminal stage of the process.

In evaluating the blood pressure, the diastolic is the important factor. A persistent diastolic of over ninety is considered abnormal. Blood pressure may be evaluated most truly just before or after the patient arises in the morning, or while he is asleep. A normal size heart is found with the volatile type of hypertension. An enlarged heart is indicative of a chronic progressive disease. The eyeground picture reveals the state of the capillaries. Concentration tests of the urine will tell the condition of the kidneys. Blood pressure readings alone should not be the sole criterion for the severity of cardiovascular-renal disease.

In the management of real hypertension, the commonly used bromides, barbiturates, and potassium thiocyanate are not effective enough. Properly done, sympathectomy is a severe and radical treatment not on a generally recognized basis. It does not attack the cause of the disease. Its best use is for the malignant type of disease.

At present, the most gratifying relief of the symptoms of headache and "jumping out of one's skin," together with the reduction of the hypertension without danger and great expense, is the maintenance of the sodium chloride in the food to approximately 1.2 gm. a day. With such a low sodium intake the fluid intake may be as liberal as desired. The sodium intake can be checked by the chloride content of the urine. It is essential to keep up the protein intake. Many proteins are rich in sodium. Protein foods extremely poor in sodium are being prepared commercially. With the relief obtained by such a dietary regimen, co-operation of the patient may be expected.

In the meantime, the important search for the specific underlying cause of the kidney disease will go on. —Editorial in *The Journal of the Indiana State Medical Association*, October, 1947.

PHYSICAL EDUCATION IN RURAL SCHOOLS

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PHYSICAL education, when given its rightful place in the schools, can be an adjunct of preventive medicine, a resource for the physiatrist and orthopedist and an ally of the general practitioner. Mutual understanding, appreciation and respect for the status, activities and objectives of closely related professional groups are essential for co-operative relationships. This is why insight by the physician into the problems of physical education and its present professional development will aid greatly in bringing about rapport between the two groups.

The program of health in the schools plays a major rôle in conditioning the attitudes of youth toward health and medical care. The physical educator's eminent place in the school health program makes his relationship with medicine especially important.

Certain fundamental principles of physical education are applicable for rural school programs as well as for urban education. Physical education may be thought of as one of the broad subject areas within the total school curriculum, and physical educators like physicians have come to realize that they cannot deal with one aspect of the child's development without impinging on the factors which make up his total personality. This means that there must be stress on education along with emphasis on the physical.

Modern physical education is concerned with education *through* the physical as well as education *of* the physical. It aims at making a contribution to physical health but is also cognizant of the potentialities that are inherent in its activities for desirable social, mental and emotional outcomes.

Qualities such as loyalty, self-control and cooperativeness can result from physical education under skillful guidance, but these things have to be taught just as arithmetic needs to be taught, and are not the natural accompaniment of the activities themselves. Joyous physical recreation has implications for mental health, in that there may be considerable relief from the tensions that are all too prevalent in the child's life today. Children who become skilled at games, sports and other forms of exercise find opportunity for self-expression in physical activity and at the same time gain a sense of achievement through good performance.

Vigorous, intelligently directed activity can aid in the development and maintenance of strength, speed, agility, endurance and skill, in children who are physiologically sound. Determination of the program and types of activities in terms of games, sports, swimming, rhythmics and prescribed activities can be made only after thorough health appraisal and recommendation by the physician.

Those who are carefully guided in their school physical education experiences should enter adult life with an appreciation of the needed balance between exercise, rest and relaxation.

At the present time there are over 300 colleges offering majors or minors in physical education, health education or combinations of the two. One accomplishment has been the increase in the length of these courses, along with those for other teachers, to four or five years. But curriculum patterns vary to a considerable degree, requirements are far from uniform, and faculty qualifications have not been standardized. In addition, certification standards for the teaching of physical and health education have not been fully developed. But these conditions are no more difficult than those which prevailed in medical education only a few decades ago. Vigorous professional action like that which cleared up the similar situation in medicine is obviously needed.

Problems of inadequate salaries and unsatisfactory teaching conditions further complicate the picture. We cannot expect the needed type of young people to enter the field until the compensation is somewhat commensurate with the training required. Genuine interest in the development of youngsters keeps many good teachers on the job but the economic insecurity they suffer is bound to materially lower their effectiveness.

The medical profession has made great strides in rooting out the quacks who attempt to foist

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unscientific methods, worthless devices and harmful remedies upon the people. Physical education has yet hardly begun the fight against the cultists who seek to invade its ranks. Muscle for muscle's sake theories, exercise prescribed through the mails, useless exercise appliances and "physical culturists" who have never heard of basic science may be wrongly identified with physical education by the public and so undermine the integrity of a developing profession.

Organized medicine has been largely successful in warding off public pressure for premature or ill-advised use of the spectacular. But education has often been unable to resist public demand for sports spectacles by the few at the expense of adequate physical education for the many. Properly administered spectator sports can have a wholesome place in education. The skilled performance of varsity groups should motivate wide participation by our youth on many types and calibers of teams. But an interscholastic sports program which stimulates "spectatoritis" among our boys and girls cannot be classed as educationally sound.

Over a century of socialization of the schools of America has not brought solutions to educational problems in rural areas. There are shortages of physicians in many rural districts but there are shortages of teachers in the same places. Just as better facilities and more adequate personnel for medical service are found in urban areas, so are the personnel and facilities for education.

Well-developed outdoor play areas, gymnasia, swimming pools and other equipment which are the laboratories and clinics of physical education are almost entirely lacking in the rural areas.

Neither the little red school house nor its counterpart in the hospital has been able to provide the conditions requisite to an educational program or medical care of the quality to be found in metropolitan regions. Recommendations of many groups indicate that at least a partial answer to this problem may come about through the consolidated school and the affiliated hospital.

In many rural situations, teachers who might be called general practitioners in education are directing instruction. At the elementary school level in the small schools, the teacher may handle her own physical education as well as all the other subjects. In the smaller high schools we have the P.E. and S. men; that is, the people who teach science, physical education and many other combinations. With adequate background, effective in-service education and helpful supervision, acceptable work may be done. But many practical difficulties stand in the way.

In Minnesota, for example, among about 1,100 men and women teaching physical education, some 300 had a major in the field and only about 130 had a minor. Another 130 were granted permission to teach part-time in physical education by reason of completion of a nine-quarter hour requirement. Over 550 had no certificate but 450 of these attended short-term regional fall training conferences and subsequently were granted permission to teach. Obviously the best prepared of these teachers will be found in the larger communities where teachers like doctors seem to find the opportunities greater, equipment and facilities more to their liking, and living conditions more attractive.

A program for interpretation of physical education to the public and to the home is badly needed. Rural parents may often believe that their children secure enough exercise doing the chores at home and therefore have no need of physical education in school. Nothing could be further from the truth. They often need it more than the city children do. While the country youngster ordinarlily gets plenty of exercise, he too frequently lacks the skill to play and work well with others. He is too often an example of poor co-ordination and awkwardness in the extreme. His posture and body mechanics are apt to be very poor, and his home program of exercise but rarely gives him a background for enjoyment of physical recreation activities.

Understanding physicians, parents and teachers are aware that the play life of children is just as important to growth and development as are work experience and academic learning. They also recognize the necessity for skillful guidance in these activities if their inherent values are to be realized. But many of the opportunities which have been accepted as the natural heritage of the city youngster have been denied to rural youth.

Some teachers and administrators are unsympathetic toward the school health and physical education program. Persons who are primarily academic in their thinking may not sense the tremendous educational possibilities that exist in the wholesome physical education activities which

are so close to the heart of the child. The lip service that has been given to the health objective in education must be translated into action, and the real life experiences that are available utilized to their fullest extent.

Courses in teacher education institutions need to be re-evaluated and, when necessary, the offerings in physical education increased and reorganized so that elementary teachers will be prepared to teach physical education effectively under supervision.

In-service education programs, including institutes such as those which have been conducted in Minnesota, workshops, summer school courses and other devices to help teachers in service to become better qualified for instruction in physical education, should be developed.

Supervisors, co-ordinators or consultants in health and physical education need to be provided, especially in rural areas, to help teachers to plan and develop worthwhile programs.

At the secondary level people who can teach health and physical education in our rural high schools and assume responsibility for co-ordinating rural recreation programs can be prepared. This combination will make it possible for a rural community to procure a person with major training in the field. To go into the reasons for securing a specialist to do this important job is unnecessary.

The school program of physical education activities must be broad and varied and take into account the needs and capacities of individual pupils. Classification of pupils for activity as the result of a medical examination is a prerequisite to desirable physical education. There needs to be a program for girls and boys who are capable of enjoying a full schedule of activities, a modified plan for children whose exercise must be restricted, and prescribed corrective activities for those who will benefit from such a routine. The physician's advice in respect to the individual child's place in this program is vital to its success. Then there must be real teaching which places emphasis on individual needs.

Sufficient time for instruction and enough facilities, supplies and equipment to make possible an adequate program are essential. The class period in physical education needs to be regarded as a time for effective instruction and not as an occasion for undirected play. There should also be a chance to practice and enjoy the skills learned in the classes during leisure time. Informal games and a broad intramural sports program within the school, as well as competition against teams from other schools, can provide all students with such an opportunity.

All of this will cost money. So will better medical care, hospitals and public health services. There are ways of planning intelligently to get the most for our money but there is no way to provide the kind of educational program our children need without reasonable financial outlay. Physicians are familiar with the expenditures, present and needed, for medical care, hospitals and public health. It is interesting to note the parallels with educational investment.

At the present time in this country we are spending less than 2 per cent of our annual income on education. Great Britain is engaged in an educational program that will take between 6 and 7 per cent, and Russia is planning to use between 17 and 20 per cent of its national income for educational purposes. Each year in the United States we spend more for amusements, tobacco, liquor or cosmetics than we invest in the education of our youth.

The improvement of physical education in our rural schools cannot be isolated from the enrichment of education in general, and the betterment of public health, medical facilities and medical care. These things can be achieved only when all the professional and lay groups concerned plan and work together as a team. Through wholehearted participation on this team, the medical profession will place itself in a strategic position to provide leadership and guidance in the advancement of rural health and rural living conditions.

HOSPITAL FACILITIES FOR ALL

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THE important health objective of reasonably adequate hospital facilities for all the people has become a realistic possibility with the enactment of the Hospital Survey and Construction Law. Under this Act the Congress has authorized an appropriation during each of five years of $75,000,000, or a total of $375,000,000, to assist in the building of needed hospitals and public health centers. Since the law provides that the Federal share shall constitute one-third of the cost and the non-Federal funds the other two-thirds, the law provides for a nation-wide hospital building program in the amount of $1,125,000,000.

Purpose of the Program

The essential purpose of the law is to provide Federal financial assistance to the states for the attainment of "the necessary physical facilities for furnishing adequate hospital, clinic, and similar services to all their people". This purpose is to be carried out through the following activities:

1. The determination of the hospital and public health center needs through state-wide surveys.
2. The development of a state-wide plan for the construction of facilities needed to supplement existing hospitals.
3. The construction of the facilities determined to be necessary and which conform with the construction program which is part of the approved state-wide plan.

The law provides for the construction of facilities for all kinds of patients and the types of hospitals which may be constructed under this program include general, tuberculosis, mental, chronic disease and other types of special hospitals but not those furnishing primarily domiciliary care. Hospital-related facilities including laboratories, out-patient departments, nurses' homes and teaching facilities may be constructed. The building of public health centers established for the provision of public health services authorized by state and local laws, including related facilities such as laboratories and administrative offices, also may be assisted under the law. The term "construction" as used in the law is defined to include the construction of new buildings, the expansion or remodeling of existing buildings, and the initial equipment of the constructed facility.

Administration of the Law

The Federal administration of this program is the responsibility of the Surgeon General of the United States Public Health Service in the Federal Security Agency. The Surgeon General issues regulations governing development and administration of state construction plans. The United States Public Health Service also prescribes minimum standards of construction and equipment of hospitals and assists through development of sample plans and the giving of expert advice on problems. The United States Public Health Service has the assistance of a Federal Hospital Council composed of eight members appointed by the Federal Security Administrator of whom four shall be outstanding authorities in the operation of hospitals and health activities and four members shall represent the consumers of hospital services and be familiar with the needs in urban or rural areas. The Federal Hospital Council has the responsibility of approving the Federal regulations governing the state plan for hospital services and the State Hospital Construction Program. The Council also serves as an appeal body for consideration of the approval of state plans and has advisory functions in the Federal administration of this program.

To qualify for the grant of Federal funds, a state must designate a single agency to conduct the state-wide survey and planning, and a single agency to administer the construction plan. One agency may serve for both functions which must be conducted in conformance with the requirements of the Federal law and regulations. The state agency must have the consultation of an advisory council which shall include "representatives of non-government groups and of state agencies concerned with the operation, construction or utilization of hospitals including representatives of the consumers of hospital services".

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Surveys and Planning

The Act authorizes the appropriation of three million dollars to assist the states in surveying their needs for hospitals and related facilities and in the development of plans for the construction of needed additional hospitals and public health centers. Of this authorized amount, $1,791,000 has been appropriated. This fund will be allotted among the states on a population basis and shall be available to defray the cost of state functions only in the making of surveys and planning during the five-year period of the program. Within its allotment each state will receive Federal grants equaling one-third of its expenditure for these purposes. The remaining two-thirds of the survey and planning costs must be provided by the state.

This program has placed difficult responsibility on the state. Under the terms of the law and the Federal regulations, the planning must be concerned with the total number and general method for equitable distribution of hospitals. All categories of patients and all areas of the state must be considered and a plan made to meet the needs in a balanced and coordinated system of hospital service. Factors to be studied include the number and distribution of the population, travel and trade patterns and the physicians and nurses available to staff the proposed hospitals. Plans for construction must be guided by the financial resources available for construction and for maintenance and operation. The minimum functions involved in this work include an inventory of existing facilities, a survey to determine the need for additional hospitals, the development of a construction schedule and a priority system for the allocation of the Federal funds in the order of relative need for the individual project.

For the purposes of the Act facilities are considered to be adequate in the state if hospital beds are provided in the various categories according to the following ratios:

1. *General and Allied Special Hospitals*—4.5 beds per 1,000 population.
2. *Tuberculosis Hospitals*—2.5 beds per average annual death from tuberculosis.
3. *Mental Hospitals*—5 beds per 1,000 population.
4. *Chronic Disease Hospitals*—2 beds per 1,000 population.
5. *Public Health Centers*—1 bed per 1,000 population.

These allowances are for the state as a whole. Within the state the Federal requirements intend that general hospitals be planned on an area basis to provide a pattern for a co-ordinated hospital system. The *base area* with a large teaching hospital serves several *intermediate areas* having smaller general hospitals. Each of these in turn serves neighboring *rural areas* with smaller hospitals. The ratio of beds to population is graded according to the following standards:

Rural Areas—2.5 beds per 1,000 population
Intermediate Areas—4 beds per 1,000 population
Base Areas—4.5 beds per 1,000 population

The Construction Program

The $75,000,000 annual construction fund appropriation authorized by the Act for each of the five years is to be allocated to the states on the basis of factors of population and per capita income. This formula will give higher allotments per capita to low income states. Out of each $75,000,000 appropriated, the Minnesota allotment will be $1,655,175. Since one-third of the construction costs may be met from the Federal funds, there is a possible annual construction program in Minnesota in the amount of $4,965,525. The Congress has not actually appropriated construction funds, but late in its last session it did authorize the activation of the construction work during the fiscal year 1948 through contractual obligations for the Federal share in approved projects within the limitations of state allotments and the total of $75,000,000 for the country as a whole.

However, before a state may receive federal grants for construction purposes it must submit to and have approved by the United States Public Health Service a state plan for construction of needed hospitals which must conform to the described principles of planning. In addition the state plan must provide for the adoption of minimum standards of construction which shall not be less than the Federal requirements and establish the necessary administrative organization and methods. Also, the state must provide the funds to finance the administration.

Project applications may be received for consideration by the state agency only when this work is completed. When that time comes project applications are to be processed in the order of priority of need insofar as local funds are avail-

able for construction and operation of the hospital. In establishing priorities, consideration must be given to the relative need in the various categories of hospitals and, for general hospitals and public health centers, there shall be emphasis on rural areas and those with relatively small financial resources. Also, priority is to be given to new hospitals and additions to existing buildings, and projects of a size consistent with efficient and economical operation.

In addition to priority requirements the individual project must meet eligibility factors set forth in the Federal law and regulations. These factors which are designed to promote qualified community hospital service, are as follows:

1. The hospital is needed as shown in the state plan for hospital services.
2. Public or other non-profit ownership of the hospital, which means that no part of the net earnings of the constructed hospital may lawfully inure to the benefit of any private individual.
3. Assurance by the owner that hospital services will be provided in the community without discrimination on account of race, creed, or color.
4. Assurance by the owner that hospital services will be provided in reasonable amount to persons in the community unable to pay therefor.
5. Ability of the owner to finance two-thirds the cost of the construction.
6. Ability of the owner to finance the operation of the hospital for which evidence must be provided.
7. Ownership of a suitable site for the hospital.
8. Development of blue-print plans and specifications for construction of the proposed hospital by a registered architect in conformity with the state and Federal requirements.

Present Status in Minnesota

Under the provisions of existing statutes, the Governor of Minnesota designated the Minnesota Department of Health to conduct a Hospital Survey and Construction Program in cooperation with the United States Public Health Service. A State Advisory Council has been appointed and is functioning in a consultative capacity. An inventory of existing facilities has been conducted and this information is now being prepared for use. A study of total needs for hospitals is under way and it will require a number of months to complete this work and develop the construction schedule and priority system as well as make other preparations for administering the program in the state.

TABLE I. NUMBER OF INSTITUTIONS AND NUMBER OF BEDS IN VARIOUS CATEGORIES

	Number of Institutions	Number of beds (complement)
General & Allied Specials	196	12,846
Maternity Homes	32	70
Serve Special Groups	17	706
Nervous & Mental	15	12,107
Tuberculosis & Preventoria	15	1,971
Chronic & Convalescent	128	2,839
Totals	403	30,539

The inventory of existing facilities was conducted by the staff of the Minnesota Department of Health during the period extending from May, 1946, to April, 1947. Although the study of information collected in this survey is not yet completed, certain preliminary data are available. These data relate to the numbers, bed capacities and uses of the various types of institutions and certain conditions of staffing, equipment and physical conditions of these buildings. This information is presented in the series of nine tables included with this report.

Preliminary Information on Existing Hospitals

As shown in Table I, the inventory revealed 403 institutions with a total of 30,539 beds available for the care of the sick and injured and for obstetrical cases. Approximately five-sixths of these beds are about evenly divided between the general and allied special hospitals and the nervous and mental group. The allied special group is made up of the pediatric, contagious, cardiac, orthopedic and other specialized hospitals for which a separate listing was not prepared. The 1,971 beds in fifteen tuberculosis hospitals are considered quantitatively adequate for the needs of the state. The 128 institutions with 2,839 beds for the chronic and convalescent include a few hospitals and the relatively large number of nursing homes established for the care of these patients. There are only seventy beds in the disappearing maternity home, which is the 1 to 3 bed facility for normal maternity patients estab-

TABLE II. TOTAL COMPLEMENT AND NORMAL BEDS IN GENERAL AND ALLIED SPECIAL HOSPITALS

	Beds		Bassinets	
	Complement	Normal	Complement	Normal
General	12,194	11,561	2,499	1,376
Allied Specials..	652	616		

TABLE III. NUMBERS OF HOSPITALS IN CATEGORIES DISTRIBUTED BY BED CAPACITY

	Number of Hospitals	Bed Capacity			
		1-24	25-49	50-99	100 & over
Gen'l & Allied Specials.	196	92	49	25	30
Nervous & Mental.....	15	4	3	0	8
Tbc. & Preventoria.....	15	0	6	5	4
Chronic & Convales....	128	95	22	7	4
Totals	354	191	80	37	46

lished by a nurse in her own home in a community without hospital services. The seventeen institutions serving special groups include the infirmaries and hospitals of institutions such as schools, prisons, and reformatories.

The effect on bed capacities of this period of high hospital service demand is presented in Table II. The general hospitals provide more than 600 extra beds as shown by the difference between a complement of 12,194 available beds and the total normal capacity of 11,561 beds. While the hospitals have also set up extra bassinets for newborn infants, the difference between the complement and normal bassinet counts as shown in this table is due largely to the unusually high floor area standard used in this study for the determination of normal bassinet capacity.

It is interesting to note in Table III the relatively large number of small hospitals existing in Minnesota. Of 354 general and specialized hospitals, 191 institutions have bed capacities of twenty-four or less. This number includes ninety-five nursing homes in the chronic and convalescent category. However, of the 196 general and allied special hospitals, ninety-two have capacities of twenty-four beds or less and an additional forty-nine have capacities in the twenty-five to forty-nine bed group. Seven of the total of fifteen institutions for nervous and mental patients have forty-nine beds or less and six of the total of

TABLE IV. NUMBER OF HOSPITALS IN CATEGORIES DISTRIBUTED BY PER CENT OCCUPANCY OF NORMAL BEDS

	Number Hospitals Reporting	Per Cent		
		Less than 60	60-79	80 & over
Gen'l & Allied Specials.	193	62	62	69
Nervous & Mental.....	15	2	1	12
Tbc. & Preventoria.....	15	4	4	7
Chronic & Convales.....	124	21	37	66

TABLE V. HOSPITAL PERSONNEL BY DEPARTMENTS
For 188 general and allied special hospitals with bed complement of 12,760

	Numbers of Personnel	Numbers of Personnel per 100 beds
Administrative	798	7
Dietary	1,563	12
House and Property.....	2,280	18
Professional	9,868	77
Totals	14,509	114

fifteen tuberculosis hospitals fall in the twenty-five to forty-nine bed capacity group.

Closely related to the large number of small hospitals is the surprising number of institutions reporting a relatively low percentage of occupancy during the report year of the study. Of 193 general and specialized hospitals giving this information, sixty-two reported an occupancy of less than 60 per cent. In the small hospital this is due to the uneven flow of the number of daily admissions and to the inflexibility of accommodations for care of various diseases and the variation of patients as to sex and age. Therefore, the information reported in Table IV does not indicate a surplus of hospital beds.

The data on hospital personnel by departments as reported by 188 general and allied special hospitals are summarized in Table V. These hospitals with a bed complement of 12,760 available beds reported a total of 14,509 personnel. This is a ratio of 114 workers per 100 beds. While hospitals having nursing schools and other teaching programs will have a higher ratio, which may approach two staff members per bed, it is significant that the average Minnesota hospital employs workers in a number more than equal to its bed capacity.

TABLE VI. NUMBER OF HOSPITALS IN CATEGORIES WITH RESPECT TO DIAGNOSTIC FACILITIES

	X-ray in Hospital		Laboratory in Hospital	
	Yes	No	Yes	No
General & Allied Specials.	172*	24	139*	57
Nervous & Mental.....	8	7	10	5
Tuberculosis & Preventoria	14	1	13	2
Chronic & Convalescent....	2	126	3	125
Totals	196	158	165	189

*In hospital.....140 In Dr.'s office in same bldg.... 32

*In hospital.....107 In Dr.'s office in same bldg... 32

TABLE VII. NUMBER OF HOSPITALS IN CATEGORIES GROUPED BY YEAR OF CONSTRUCTION OF MAJOR BUILDING

	Number of Hospitals	1909 & before	1910-1919	1920-1939	1940 & after
Gen'l. & Allied Specials	184	36	54	74	20
Nervous & Mental	15	10	2	3	—
Tbc. & Preventoria	15	—	10	5	—
Totals	214	46	66	82	20

TABLE VIII. NUMBER OF HOSPITALS IN CATEGORIES DISTRIBUTED BY TWO CONSTRUCTION FEATURES

	Fire Resistive Construction		Built as Hospital	
	Yes	No	Yes	No
General & Allied Specials.	81	115	140	56
Nervous & Mental.....	3	12	11	4
Tuberculosis & Preventoria	8	7	15	—
Chronic & Convalescent...	8	120	18	110
Totals	100	254	184	170

TABLE IX. CONTEMPLATED HOSPITAL BUILDING PROJECTS IN MINNESOTA

June 1, 1947

	New Hospitals	Replacements	Additions	Remodeling	Total
Gen'l & Allied Spcl..	61	38	58*	18	175
Nervous & Mental..			9		9
Tbc. & Preventoria..			3*		3
Chronic & Convales..			5**		5
Totals	61	38	75	18	192

*Includes two nurses' homes
**Includes three planned in conjunction with general hospitals

The number of hospitals in various categories without x-ray and laboratory facilities in the building is presented in Table VI. Twenty-four general and allied special hospitals do not have x-ray equipment and fifty-seven of this group are without laboratory facilities. This preliminary study does not attempt to analyze the extent of the equipment or service provided in the hospitals which do have the facilities. Thirty-two of these hospitals have the benefit of use of x-ray equipment and laboratory facilities in physicians' offices in the same building.

Certain major features of the physical condition of Minnesota hospitals are presented in Tables VII and VIII. In forty-six of 214 general and allied special, nervous and mental and tuberculosis hospitals, the major building is thirty-seven or more years old and another sixty-six are twenty-seven or more years old. Of the total group of 354 general and specialized hospitals, including those for chronic and convalescent patients, more than three-fifths are not of fire-resistive construction and nearly one-half were not built as a hospital. These figures are influenced by the relatively large number of nursing homes established in dwelling-type buildings. However, only eighty-one of 196 general and allied special hospitals are classified as of fire-resistive construction. Also, 50 per cent of these institutions were not built as a hospital.

Information available to the Minnesota Department of Health on June 1, 1947, indicated a total of 192 contemplated hospital projects in this state. As shown in Table IX, these include sixty-one new hospitals, thirty-eight replacements, seventy-five additions to existing hospitals and eighteen remodeling projects with the majority of the planning in the general hospital category. This information covers all sizes of institutions in the various categories as well as all proposed construction projects irregardless of the stage of development. A number of these hospitals are under construction. This information indicates a state-wide interest in hospital construction which gives the hope for the needed effort and funds to provide the improvements and new hospitals which will give reasonably adequate hospital facilities for all.

RURAL MEDICAL SERVICE

FRANK J. HIRSCHBOECK, M.D.
Duluth, Minnesota

AS one reads current periodicals and newspapers, one might gain the impression that the physicians of this country are in league to debar the American public from adequate medical treatment. Much passion and prejudice is evinced, and the onus of inequality of service is placed on one profession without regard for a sane and dispassionate discussion of all the factors involved. To the credit of the various rural agencies and the participants in the conferences on rural health held under the auspices of the American Medical Association, one is, on the other hand, impressed by the fair-mindedness of nearly everyone in attendance at these meetings. It is evident that so great a problem will require considerable survey and analysis before satisfactory results may be obtained, and I feel it a definite responsibility to bring this matter before you for your consideration and review.

At the present time, I believe it cannot be gainsaid that the type of medical service provided in the United States of America is superior to that of any other country in the world, but it is also admissible that there is, nevertheless, opportunity for improvement. In a prefatory way, it should be stated that physicians, in a large measure, are in full sympathy with any program tending to foster better medical care in rural areas. The need is existent and recognized; the methods of correction must be explored. Critical statements that the AMA seeks to keep the number of medical students at a selfish low level can be refuted by the dean of any medical school, as has been indicated in the words of Dr. Diehl of the University of Minnesota. The problems of medical education and its significance for medical practice are manifold, and it should be remembered that certain obstructive elements, as inadequate educational facilities, lack of teachers, inadequate laboratories in many instances, and insufficient internships, all play a part. An argument for accelerated programs in the schools may be met by the contradiction that such programs are not to the best advantage of the student nor the public, and may prevent participation by worthy students who may be obliged to work for much of their education.

In the *Saturday Evening Post* of May 17, 1947, an article by Albert Q. Maisel entitled SO YOU CAN'T GET A DOCTOR accuses the AMA and the medical schools of the country of practicing a cut-back program favoring a deficit of physicians. He cites Dr. Victor Johnson, of the AMA staff, appearing before the Senate Committee on Military Affairs, where it was stated that the postwar years would require 35,000 additional physicians to permit an adequate supply, and that of 40,000 graduates in six years, 24,000 would be replacements for deceased physicians, allowing only 16,000 to provide for the necessary 35,000. This statement is true insofar as it relates to this specific factor, but the interplay of other elements is not quoted.

There is little doubt that medical service was inadequate during the war years and that adequate medical care was not available to all our citizens. On the other hand, everyone recognizes the inevitable dislocation in all channels of life in the greatest cataclysmic upheaval of all time. It is admitted, I believe, that the armed forces in enrolling 60,000 physicians, or about 45 per cent of all those in practice, took more physicians from civilian practice than may have been necessary, but few of us would quarrel with the exigencies entailed in a struggle for national survival. In many areas where only a few physicians were in practice, the enlistment of some caused medical hardship on the citizenry, but the Committee of Procurement and Assignment, of the American Medical Association, performed a difficult duty with remarkable foresight and success, though frustrated no doubt in many instances by voluntary enlistment on the part of patriotic physicians without due regard for area needs, which unbalanced the per capita alignment.

In his presidential address at Atlantic City, President Bortz of the AMA pointed out that the medical branches of the armed forces have been separating medical men from the services as rapidly as safety permitted, liberating many for the resumption of practice.

From the Department of Internal Medicine, the Duluth Clinic, Duluth, Minnesota.
Read at the Rural Health Conference at the annual meeting of the Minnesota State Medical Association, Duluth, Minnesota, July 2, 1947.

Many medical veterans, having noted certain advantages of the type of practice in the army hospitals, particularly with reference to specialization, have been imbued with the apparent advantages of specialization in practice, and on discharge have sought residencies and fellowships to further a program for ultimate certification by the specialty boards. Others, planning on returning to general practice, and aided by Federal subsidies, have undertaken graduate training to prepare them more fully for a return to general practice, recognizing the fact that many aspects of military experience were also conducive to professional stagnation through limitation to certain types of medicine, notably among healthy males between the ages of eighteen and forty. Twenty thousand physicians, it is said, who have availed themselves of such graduate training, will in the next few years be searching for a location. A large number of recent graduates have also been inducted in the Army, Navy and Air Forces, a practice which may or may not, depending on national emergency, be abandoned in a year or two, further allowing young men to select a site for practice.

The proper civil reallocation of such personnel is an immediate and urgent problem, to which the various state committees should apply themselves.

Unfortunately, partisan expression on both sides of any problem often leads to discord that defeats the ultimate purpose in view. Proponents of a greater supply of physicians lose sight of the fact that an oversupply of doctors may lead to professional stagnation because of lack of work and opportunity, and those who believe in a restricted number of graduates are not aware of the many needs in the rural areas which involve definite social and economic wants. However, it would seem that, in the present state of international relationships and the need of an adequate medical corps, additional increments of medical men and women are needed, and the medical colleges should be, and we trust are, aware of it. A large army, in peace or at war, will by necessity remove many available men from practice, and the additional 10,000 doctors graduated during the war years by the accelerated program are not enough to make up the deficit. During the war, the medical colleges were free to admit that there was an insufficient supply of physicians. Now that a semiemergency still exists the need cannot have been completely eliminated, a fact which I am glad to say our state university has recognized by permitting an increase in enrollment. It is to be remembered also that there was not only a dearth of physicians but, because of the dislocations of warfare, there was a dearth of personnel in virtually every field of human endeavor. Postwar adjustments will correct many of these problems.

Much has been said about the unequal distribution of doctors in urban and rural areas. Broadly speaking, and in a general way, there is much in favor of the view that physicians tend to gravitate to the more metropolitan areas. In years when there is a relative deficiency in the total number of physicians, such a migration is likely, but many of the estimates given in current popular articles need a more critical review. As Dr. Dickinson has indicated recently, state and county boundaries should not be used in considering the supply of doctors because medical service, in a great measure, bears no relation to governmental boundaries. It is closely akin to trading areas and extends beyond county or even state lines.

Before the war, the per capita distribution of doctors in rural areas was 1:1,700 and in cities 1:650. A ratio of 1:1,500 is, I believe, considered desirable. In rural areas the available hospital beds were 2 per 1,000 instead of 3.5 or 4, usually considered adequate in a community. The per capita difference in cities and rural areas is due to several factors aside from mere choice of location. Cognizance must be taken of the fact that the cities are not overwhelmingly supplied with physicians, since many city physicians are specialists. In Duluth, for example, nearly 50 per cent are specialists who tend to attract patients from more remote communities. Many specialists in the cities likewise are not related intimately to family practice and are engaged in special types of work such as public health, roentgenology, pathology, research work and teaching. On the other hand, many men who are specialists perform some elements of general practice, leading to dilution of practice among the general practitioners, and the law of supply and demand, as in other occupations, tends to prevent oversaturation. Nevertheless, I think it is evident that until saturation occurs in the metropolitan areas, rural areas will find it difficult to maintain an optimal supply of medical personnel.

In his article, Maisel writes of certain states and counties having a sad dearth of physicians but doesn't discuss any of the qualifying elements which must prevail in such localities, because physicians, like everyone else, tend to locate in areas where their services are likely to be needed and where they are likely to receive adequate compensation for their efforts. I do not know the situation in the counties in Florida, Virginia and South Dakota, in which he states there is great lack of medical care, but I do know something of our own state as an index. In a recent letter to the American Medical Association Bureau of Information, Mr. Rosell, the executive secretary of the Minnesota State Medical Association, stated our situation as follows:

> "As to physicians' distribution, Minnesota is quite well provided for, as far as medical service is concerned. There are no areas in the state at the present time where physician needs are distressing. In most areas there are physicians within a radius of twenty miles, and there are no areas at present where one must travel much farther for medical service. At the present time, there are 1,000 physicians, mostly returned medical officers, who are training in Minnesota, i.e., doing graduate work or taking continuation courses, residencies or fellowships. These men will be released beginning July 1 and for the next two years. We presume that at least 50 per cent of these men will remain in this state and will meet whatever urgent demands there are for more physicians."

Seven counties in our state have less than one physician per 3,000 people, using the per capita rate as an example, mostly in the northwestern part of the state where five or six good clinical centers exist which may tend to reduce the practice of local physicians. Mr. Rosell reports that the Minnesota State Medical Association has had twenty requests for general practitioners in the state of Minnesota, eleven of which have come from areas of less than 500 inhabitants and some of which, according to personal information received, have no need of a physician in the area as they are well supplied as a community.

Though the problem may not be so acute in Minnesota, and will very likely be less so in a few years, it would be provincial to deny that medical facilities are not always easily attainable in other states, particularly in the West and South. Areas where there is a sparseness in population, or lack of contact with other physicians and medical centers, as is the case in many regions in the northwest, central and Rocky Mountain states, would almost of necessity have less attraction as a choice of location for doctors. These states also have proportionately fewer medical schools to supply needed physicians in the areas. There are only five medical schools in the vast area of the western plain and Rocky Mountain states. It is well known that graduates from medical schools tend to locate largely in areas contiguous to their alma mater. Also it would seem that there should be more opportunity for the medical education of negroes, particularly for the South, where they are an important part of the population.

Every well-meaning student of the problem must realize that the difficulty in providing suitable medical care in rural areas evolves not only upon the dearth of physicians but upon local factors as well. It is stimulating to note the efforts that are being made in various states to find ways and means of solving the problem of proper medical care, which can be done only by a consideration of all factors concerned.

Mr. Goss of the National Grange has offered several fundamental statements indicating the need of community programs, and one cannot find fault with his conclusions. He points out the need of additional physicians and hospital beds in many of our rural communities. It is also stressed that, though conditions have improved among farmers in regard to income in recent years, financial necessity still precludes the farmers' paying as much for medical service as other classes of workers and, in many cases, often where there is a sparseness of population and a lack of good arable land, it is relatively impossible. Conceivably there may be a few areas where adequate medical care may be impossible also, because of local conditions. To apply general rules to all areas to conform with the needs of such isolated instances would be unsound economics.

Mr. Goss also points out the need of better health measures in rural communities, based on the increased accident rate among farm workers, the increased infant and maternal mortality rate, and the rejection of 41 per cent of farm boys in the Selective Service as compared to 25 per cent in urban areas, purely on physical defects. Wherever the fault may lie, these figures at least indicate that the preservation of health and life is better maintained in urban areas, but rural

communities, as has been stated by many, today need more than doctors in order to solve their problems. The latter are social and economic, as well as professional. In order to improve his skill and supply stimulus for good work, the physician would choose to live in a community where good housing facilities, good social and educational relationships, good health education, good sanitation, modern living advantages, adequate laboratory and x-ray facilities, hospital and consultation advantages are available. Otherwise he would serve poorly. These advantages are available in many rural areas and towns, but it is in the smaller and more isolated communities where the lack of adequate medical facilities is encountered.

Each community must survey its own problem by a communion of advisory talent, i.e., by health councils as advocated by Rural Medical Service Committees, which should include local representatives, financial advisors, physicians, health authorities, hospital administrators, medical society representatives of the county and state, nurses and dentists. This is quite in contrast to a recent health workshop where twenty-one consultants were called in, nineteen of whom were Federal and two state employes!

In isolated areas, where few towns are situated, the problem of individual care may be difficult and even impossible of solution. This is apparent to any of us. Physicians might be induced to locate in such a community if a subsidy were provided, but this would still not answer the need for professional contact with other doctors, with diagnostic centers and hospital facilities. At best, such physicians could render only relatively inadequate medical service.

Probably too much has been said about the doctors and not enough thought given to their wives and children, who are, as members of a professional group, more critical of social inadequacies. Also in such areas public health and first aid services would be of help, as they have proved in urban areas. To facilitate better care in such outlying and sparsely settled districts, good roads are essential and satisfactory transportation facilities of great importance. It is frequently more important to bring the patient to the doctor in an organized hospital than to try to bring a doctor to the patient. Ambulance service could be on a wide community basis and staffed by someone skilled in first aid. More seriously sick and injured patients requiring ambulance service usually need the type of treatment only a hospital can supply. After the initial outlay, the cost of maintenance should be relatively small.

The construction of rural health centers, as advance stations in medical care, is desirable. They are as necessary to a community as schools. They would be of educational and therapeutic value.

In some areas on the borderline of economic balance, physicians might be supplied with office space and equipped with an available bed for temporary but necessary care and observation, pending further disposition. A method of partial subsidy might be invoked.

In such locations, if physician service is to be maintained, the physicians must be patronized. In many areas, sick people tend to by-pass their own community physicians and go to doctors in a more remote location, and physicians in smaller towns frequently complain of a lack of loyalty among their clientele. I think this may be illustrated by again referring to the six counties in the northwestern part of the state where there is a low per capita rate of physicians and where it is likely that patients tend to go to the trading areas where clinics exist for their medical care. I think this must be an important factor in this region in view of its noted fertility and financial competence.

Many areas need better hospital service, and, on the other hand, many are well supplied. When the Hill-Burton Act begins to function it is going to be difficult to separate the communities which have adequate hospital service, sometimes privately owned, from those where it is felt that such service may not be adequate. It is certain that only an impartial, unprejudiced analysis for allocation of any funds derived from the Act will be satisfactory. Such an analysis will have to consider state needs, county needs, local needs, transportation facilities, opportunities for consultation and study by the physician, availability of certain specialists and financial responsibility. Dr. Buerke, at the National Conference, stated that the operation of a hospital entails a yearly maintenance cost approximating one-third of the original outlay. This money will have to be forthcoming from hospital operation and/or local taxation because niggardly administration in the operation of a hospital cannot be countenanced. Local responsibilities, as can be seen, are indeed heavy.

The other necessity to any arrangement is a sufficient supply of medical personnel. Let us admit that more doctors are needed for the care of our rural population. I believe that strongly, especially in this period of semiemergency. The medical colleges, as for example the University of Minnesota, should graduate more students, at least for the present. Control may be practiced later if necessary. Students should be selected from the more isolated areas in greater numbers than is the case at present. Where possible, colleges supplying the South and mountain and plain states should be enlarged, and more applicants for medical education accepted from such areas, in the hope they will return to their native state. It has been suggested that some rural areas might be wise to enter a contractual relationship with local students of promise to enable them to study medicine with the provision that they locate in certain towns. From time to time, replacements could be made by more recent graduates working on a similar plan.

I think it would be expedient to consider requirements for placing recent graduates in general practice for three years or so before obtaining residencies. The objection would be raised that men who have an aptitude for research and teaching would be wasting valuable years in such work, but a system of scholarship reward could be made available to obviate insistence on this requirement in their cases. It might, however, be pointed out that even many research men and teachers might profit by contact with actual practice, and there is no doubt in my mind that specialists, who are not teachers or research men, could profit by experience in general practice. The opportunity for reaping the many admitted benefits of small town practice might offset the desire for specialization. Specialty boards could allow certain credits for such experience, as was done in the case of military service. There is also an advantage possibly in creating a residency for men who might choose to specialize in general practice, if one may be permitted to use a Celticism.

It is felt that there are too many specialists being trained. This is probably currently true because of the demand of the returned medical veterans, who have been led toward specialties because of the financial and ranking emoluments incident to their service. Medical men are professionally ambitious and tend to seek the professional glamor of specialism, a will-o'-the-wisp which is not always realized. Dr. Weaver, in his recent report before the Committee of University Relations, stated, however, that there is a trend toward favoring general practice in recent classes. Up to 1946, 80 per cent of the students indicated a preference for specialization, but in the present class, only 50 per cent indicated such a desire. I believe that if medical students were taught the many undeniable advantages of practice in smaller communities they would be prompted to choose such locations more frequently. Discussions by men in rural practice before the undergraduates would be helpful and influential.

In rural areas, on the other hand, where hospitals are located with care, specialists' consultations should be made available to general practitioners. These hospitals should be uniformly open to all general practitioners, but certain limitations according to the capacity should be placed on staff members for the benefit of the public. Like any other professional group, the administration personnel should be specially trained, and schools are now available for this purpose. Such administrators are most competent to help in the selection of material for the physical operation of the hospital, including medical equipment. Physicians who locate in smaller communities should have an opportunity for graduate work and refresher courses, because the lack of such facilities would not be to the advantage of either the medical man or the people who employ him.

Since the cost of medical care is an important problem, a summary of projected plans might be considered. By and large, feeling among doctors and among most consumers is that the method of payment by government taxation to supply the costs is not suited to American methods. It would be platitudinous and out of place in this discussion to enumerate the various ethical, economic and social reasons which impel doctors to be out of sympathy with such a plan involving a huge bureaucratic control, enormous outlay of funds out of proportion to need therefor, or the results obtainable, and the degradation of professional standards affecting all the phases of practice.

Nor are doctors kindly disposed toward the belief that consumer control on a prepayment basis is a satisfactory method, as it is felt that good medical care can only exist with the profession unhampered by restriction imposed on them by lay people whose viewpoint is necessarily

based on economic consideration rather than on professional standards.

This leaves for evaluation, then, methods of prepayment which will permit of free choice of physician and leave the methods of ethical practice in the hands of those who, by tradition and training, are best able to judge of the safest method of practice for the common good. Methods of prepaid medical care have been in existence for over sixty years. The more recent impetus supplied by the Blue Cross Hospital Plan, with its tremendously successful program, has brought forward the question of a plan to supply medical care as well, at a rate commensurate with the schedule of the Blue Cross. The additional farm income of recent years has made it possible to foster ideas, in this respect, for the rural communities. Physicians in most states, including Minnesota, have developed similar plans which already are or will soon be functioning.

Since each state, or even community, has different problems, some flexibility in application will be necessary. The potential subscribers need to be instructed in regard to the insurance plans to assure popular acceptance. This is a necessity for its satisfactory operation. Such an organ already exists through the agency of the Blue Cross, which in this state has been employed as sales agents for this program. To work effectively, it needs extensive support, both in the urban and rural areas, so that the two zones may counterbalance each other in regard to various differences which may arise.

Low-income groups may have to be supported by the tax structure. The plan being launched in this state has been displayed at this meeting and it is hoped that you have acquainted yourself with the details of its operation.

As the popularity of the program expands, the benefits and costs will have to be changed to meet the situation. One of the chief difficulties will be the production of a wide sale of policies throughout the state so as to allow good actuarial appraisal and satisfactory operation. It is certainly as important to insure for health as it is to insure against financial loss from fire, automobile accident or crop failure.

In summary, therefore, I wish to point out that the problem of rural service is not one that is restricted to the community nor to the medical profession, but it is one which requires a most careful survey of each community and its needs. Scarcities in one community may not apply to another, and conclusions based on individual and specific interpretations of factors may be delusive.

The medical profession has certain responsibilities, and administrative agencies, like the AMA, medical colleges and the American Hospital Association, have a great responsibility. On the other hand, there is an equal responsibility which is local. It seems to me that at this time the local responsibility is actually the more difficult problem to surmount.

A SOUND PUBLIC HEALTH PROGRAM

(Continued from Page 1053)

for the common benefit of all, including as powerful associates, labor, co-operatives, management, the press, the churches and the schools.

Let me repeat that the purpose of a sound local public health program is such social action as will bring the richest values and longest enjoyment of life which the inherited qualities of each of us makes possible.

Local government is the instrument created by a free and representative democracy to make possible effective social progress which will be best measured by the health status of our people.

History of Medicine In Minnesota

NOTES ON THE HISTORY OF MEDICINE IN FILLMORE COUNTY PRIOR TO 1900

By NORA H. GUTHREY
Mayo Clinic
Rochester, Minnesota

(Continued from September issue)

Walter Earl Richardson was born on July 15, 1872, at Elgin, Minnesota, son of Joseph Richardson and Ursula Miles Richardson, "Yankee farmers," both natives of Vermont, who in 1858 had come as pioneer settlers to Wabasha County, Minnesota. Of the seven children of Mr. and Mrs. Joseph Richardson there were living in 1943 Walter E. Richardson, M.D., of Rushford, and Frank, Lenora (Mrs. Filkins) and Clara (Mrs. Ellsbury), all of Elgin, Minnesota.

After completing his preliminary education in the schools of Elgin and by extension work from business and normal schools, Walter E. Richardson studied medicine in 1892 and 1893 under the preceptorship of Dr. Franklin Staples and Dr. Edward D. Keyes, of Winona, in preparation for enrolling at Rush Medical College in Chicago. On his graduation from Rush in 1896 Dr. Richardson began to follow his profession in Preston, Fillmore County. He was licensed in Minnesota by examination on June 22, 1899, and in 1900 he moved from Preston to Slayton, in Murray County, where for nineteen years he conducted his own hospital and carried on a general medical and surgical practice; from 1919 to 1931 he was in Pipestone, in Pipestone County, and from 1931 to 1938 at Philip, South Dakota. In 1938 Dr. Richardson returned to Minnesota, to settle in Rushford, Fillmore County.

Always especially interested in ophthalmology, otology, rhinology and laryngology, Dr. Richardson in 1912 took postgraduate work in these special fields at the Chicago Policlinic and at the Chicago Eye, Ear, Nose and Throat College and Hospital in 1918. In Rushford, with offices in his residence and with the facilities of the Winona General Hospital available to him, he has been in general practice, placing special emphasis on the diagnosis and treatment of diseases of the eye, ear, nose and throat.

During World War I Dr. Richardson was a captain in the Medical Corps of the United States Army, attached to Base Hospital No. 99, American Expeditionary Forces. He is a member of the Olmsted-Houston-Fillmore-Dodge County Medical Society, the Minnesota State Medical Association and the American Medical Association, attends the Presbyterian Church and is a member of all Masonic bodies. When questioned as to his favorite hobby, Dr. Richardson wrote, "My family."

Walter E. Richardson was married on June 18, 1902, to Fatima Whitney, of Slayton, Minnesota. The four children of Dr. and Mrs. Richardson are

Ursula (Mrs. F. C. Eustis, of Williams Bay, Wisconsin); Walter Whitney, a high school superintendent at Jeffers, Minnesota; William H., formerly a high school instructor, now with the American Red Cross; and Robert J. Richardson, M.D., who in 1939 on his graduation from the Medical School of the University of Minnesota, joined his father in practice at Rushford. Since the beginning of World War II Dr. R. J. Richardson has been in the Medical Corps of the United States Army; in August, 1941, he received his commission as lieutenant and thereafter he took training at Carlisle, Pennsylvania; in September, 1942, he was promoted to captain at Fort Leonard Wood, Missouri.

Calvin Hubbard Robbins was born in St. Lawrence County, New York, on December 20, 1840, the son of Marcus Robbins and Fanny Hubbard Robbins, American citizens of English descent. Marcus Robbins, a native of Wadsborough, Vermont, was a farmer and dealer in real estate and at different times he served as postmaster at Massena, New York, and as customs clerk at Ogdensburg; his grandfather was Dr. Marcus Robbins, of Brattleboro, Vermont, and one of his earlier forebears was George Read, a signer of the Declaration of Independence. Fanny Hubbard was born at Massena, New York, and became a teacher; she was a descendant of Theophilus Eaton, the first governor of Connecticut. Mr. and Mrs. Marcus Robbins were the parents of five children: Marcus, Frederick, Herbert, Hortense and Calvin.

In 1859 Marcus and Fanny Robbins came with their children to southern Minnesota, to settle in Fillmore Township of Fillmore County. Their son Calvin, who had begun his education in the public schools of Norfolk, New York, continued his studies at Fillmore and Chatfield, completing the available courses, and for a year or two after finishing his academic schooling he taught in the rural schools of the community before entering on three years of medical study in the office of Dr. Luke Miller, of Chatfield.

Calvin Robbins' medical study was interrupted by his enlistment in the Fifth Minnesota Volunteer Regiment for service in the Civil War. There exist two handwritten memoranda over the signature of Oscar Malmros, Adjutant General during the administration of Governor Alexander Ramsey, of which the first, dated at the Adjutant General's Office, Saint Paul, on October 15, 1863, notified Calvin H. Robbins as follows: "The Governor having appointed you Lieutent-Colonel [sic] of the 5th Reg. M. S. M. your Commission will be countersigned and immediately forwarded upon your subscribing the enclosed oath of office, and filing the same in this office." The second memorandum, Special Orders No. 135, dated on October 29, 1863, read thus: "The resignation of First Lieutenant [sic; no doubt correct] Calvin H. Robbins the 5th Reg. M. S. M. is accepted to enable him to accept a field office in the Regiment, said resignation to take effect from the 26th day of October, 1863." As it happened, he was taken ill en route to join his regiment and was released from military duty, his certificate of release being signed by Dr. W. W. Mayo, of Rochester, surgeon on the Board of Enrollment of the First Congressional District of Minnesota.

In October, 1864, within a year of his release from the army, Calvin Robbins enrolled at the Medical School of the University of Michigan, in Ann Arbor; in November of 1865, however, he transferred from Ann Arbor to the Medical College of Keokuk (Iowa), sometimes, as early as 1884, designated "The Medical Department of the University of Iowa," from which he was gradu-

ated in 1866. Long afterward, there was found among his effects a copy of the twenty-third annual announcement of Rush Medical College, for 1865-1866, perhaps evidence that he had considered matriculation at that school in his final year. At Keokuk his preceptor was Professor E. J. Gillett, M.D., D.D.; the title of his final thesis was "Acute Rheumatism." At that time, in some of the medical schools, and the Medical College of Keokuk was one of them, the faculty determined by vote which students should be graduated, the decision being based partly on the students' scholastic records. Only two in Dr. Robbins' class received more votes than he, and they were men who had had five years of combined training and actual medical practice when they entered the college.

In the year of his graduation, 1866, Dr. Robbins began the practice of medicine in the village of Fillmore and became a charter member of the Fillmore County Medical Society, which was organized in October of that year. In November of the same year he was married to Rosalia R. Mosher, a teacher, formerly of Canton, New York. In Fillmore Village Dr. and Mrs. Robbins made their home for the ensuing nine years. Their five children, all natives of Fillmore County, were Hortense R., Marcus P., Fanny E., Gertrude A., and Calvin Eaton.

Although surgery was his preferred field, Dr. Robbins' practice was necessarily general. In 1870 his professional card in *Western Progress*, published in Spring Valley, announced him as physician and surgeon. And that he endorsed vaccination against smallpox is evident from a Fillmore news item in the same newspaper in March, 1873: "We had a little flurry about smallpox a few days ago, but we guess the danger is past. 'Call' [sic] has been around jabbing his knife into folks generally." Of his activities, professional and nonprofessional, an extract from his diary of 1874 gives various testimony:*

Jan. 17	Operated for cancer on ————————.
Feb. 9	Gave chloroform to ———————— for Kellogg.**
Feb. 23	Subscribed for Harper's Magazine.
Mar. 2	Started the supervisor's report in the evening.
Mar. 10	Attended election. Got 108 votes to D. H. Hoff's 44 for chairman Board of County Commissioners.
April 7	Bought 4½ cords of wood of Marve Eggleston @ $3.25 a cord.
April 9	Got 20 bushels of oats @ $.40=8.00. The boys went after horse thieves in the evening.
April 14	Went to ————'s to attend his wife. *Head* and *arm presentation.* Everything all right.
April 24	Received $3.00 from town for fees as supervisor.
April 26	Got ½ pint of *Female tonic* for ————'s wife (at Wykoff).
May 21	Met Dr. Ross [John A. Ross, of Preston] at ————'s and performed a craniotomy on child to deliver the woman.
June 2	Met on town board to view the bridge. Resolved to build a new one.
June 12	Met on town board. Gave job to build bridge to H. B. Stewart for $174.
June 23	Went to Spring Valley and bought P. O. order for the New York Sun.

In 1875 Dr. Robbins moved from Fillmore to Wykoff, a larger village a few miles north in the same township, on the railroad and then in the period of its greatest prosperity, and there in the next twenty years his interests

*The names of patients have been deleted by the writer.

**Evidence has not been found that a Dr. Kellogg resided in the county. This perhaps was Dr. D. W. Kellogg, surgeon-dentist of Decorah, Iowa, who at intervals made professional trips to Preston and other points in the county; "all work done in the most skillful and artistic manner."

of all types continued to widen. In Wykoff he owned his home, as he always did wherever he lived, and in addition to his practice operated a drugstore; in later years he was certified as a registered pharmacist. After 1878, when Dr. James H. Phillips settled in the village, Dr. Robbins took the younger man into partnership with him in the drug store and in general practice, an association which continued until Dr. Phillips removed to Preston in the early eighties.

In 1871, while in Fillmore, Dr. Robbins had become a member of the Minnesota State Medical Society; in 1874 he was one of the seventeen physicians in the state who responded to the request of the Committee on Practical Medicine regarding the effect of the climate of the Northwest on asthma, and he "reported two cases not affected by ten years' residence." In succeeding years he was appointed a member of the Committee on Finance in 1879, and of the Committee on Obstetrics in 1883. After the passage of the act of 1883 to regulate medical practice in the state, Dr. Robbins received certificate No. 550 (R) given on December 31, 1884. And also during the period of the eighties (1886 and later) he was a member, with Dr. J. H. Phillips and Dr. G. A. Love, of the board of examining surgeons for the Bureau of Pensions of Fillmore County.

A good citizen, friendly and well-disposed, he served the community in various civil capacities. Politically he was at first a Democrat-Republican, but later became a staunch Republican and as such, on one occasion, served as chairman of the Fillmore County Republican Convention. In the early seventies he was a member of the Board of County Commissioners and of the "town board." In 1876 he was elected a representative from his district to the state legislature. He was a member of the Methodist Church and of several fraternal organizations, among them the Masons (A. F. and A. M.), Independent Order of Odd Fellows and the Benevolent and Protective Order of Elks.

In those years of long country drives Dr. Robbins owned a number of horses in which he took great pride, blooded Morgans, superior lightweight American-bred animals that were noted for their speed and endurance on the road. The ability to drive widely through the countryside not only extended his professional interests but also furthered his most absorbing avocation, the study of geology, especially paleontology. In a territory that has been well called a geologist's paradise, he was enabled to observe interesting formations and to collect fossils, and so intelligent was his research that in the nineties it brought his name into the section on paleontology of the official geological and natural history survey of Minnesota, conducted by the University of Minnesota. When Newton H. Winchell, State Geologist, and his colaborers, Wilbur H. Scofield, Edward O. Ulrich, John M. Clarke and Charles Schuchert, in carrying on the survey of the lower Silurian deposits of the Upper Mississippi Province, were in the locality of Wykoff, they received unfailing courtesy and much practical help from Dr. Robbins. From his private collection he lent them rare and unsurpassed specimens of various fossil Crustacea, and in his honor they gave the name *Platymetopus robbinsi* to a genus of trilobite found in the middle beds of Galena limestone and the name *Trochonema (Eunema) robbinsi* to a genus of gastropod discovered in the Fusispera bed, both sites near Wykoff. Mr. Schuchert, furthermore, in the spring of 1892 took some of Dr. Robbins' collection east with him for the Peabody Museum of Yale University. Many of Dr. Robbins' rare specimens are now

in the possession of his grandson, Richard Robbins Crandall, of La Canada, California, a geologist and an alumnus of Leland Stanford University.

In 1895, temporarily discontinuing the practice of medicine, Dr. Robbins moved to Spencer, Iowa, where for two years he owned and managed the *Spencer Reporter,* taking especial pleasure in writing political articles for publication in that paper. By 1898 he had left the newspaper field and had settled in Austin, Mower County, where he again successfully followed his profession of medicine and where he was known as "a gentle and courteous physician of the old school."

Dr. Robbins died in Austin on February 28, 1900, from angina pectoris. His brother Marcus, of Grants Pass, Oregon, and his sister Hortense (Mrs. McKinney), of Chicago, had died previously; his brothers, Herbert, of Oakland, and Frederick, of Pomona, California, lived more than thirty years after him. Mrs. Robbins survived nearly forty years; she died on July 19, 1939, at the home of her daughter, Mrs. S. C. Schmitt, of Los Angeles. In 1943 two of the five children were living: Fanny, wife of Dr. Samuel C. Schmitt, of Los Angeles (Fanny Robinson Schmitt died on September 21, 1943); and Calvin Eaton, a salesman, of Berkeley, California. Those deceased were Marcus; Hortense, who at the time of her death was principal of the high school at Marshall, Minnesota; and Gertrude, wife of Dr. W. G. Crandall, a dentist of Los Angeles.

In the collections of his daughter, with whom historical and genealogical research was an avocation, are objects of more than casual interest relating particularly to Dr. Robbins' early medical and surgical practice, among them his surgical instruments, his roll of obstetrical instruments, and his old forceps for extracting teeth, for like most physicians of the day he was on occasion dentist as well as physician. Among his papers are two of his internal revenue licenses to sell tobacco, issued at Mankato, one on May 1, 1866, and one on April 28, 1888, and worthy of note, his diaries, full of information.

John Angus Ross, a native of Scotland, was born in Ross Shire, the Hebrides Islands, on June 14, 1841. His mother was twice married. Of the first marriage, to Mr. Frazier, there were two children, a son Dan and a daughter Ann; of the second marriage, to Mr. Ross, three daughters, Lexie, Isabel and Jessie, and one son, John Angus.

John A. Ross received his early training near home and his formal education in medicine and related sciences at the Universities of Glasgow and Edinburgh, from one of which he was graduated in medicine and chemistry. Of his coming to the United States little is known except that he first was established in Atlanta, Georgia, perhaps having landed at Savannah, and that he undoubtedly was the bearer of letters of introduction which gave him entree to the long-established homes of Atlanta, including that of the governor of the state, whose daughter was gracious to the young Scotch physician. Dr. Ross arrived in the South in the troubled period just before the outbreak of the Civil War and when the crisis came he served the Confederate cause in one of the military hospitals. Shortly after the close of the war he left the South for the Middle West and in Chicago continued his scientific study at Rush Medical College.

The coming of Dr. Ross to Preston, Fillmore County, in early October, 1869, is of itself an interesting story. Dr. LaFayette Redmon and Dr. O. A. Case, the established physicians of the village, in the course of changing con-

ditions of practice found it expedient to improve their professional knowledge—so runs the reminiscence of one who knew the circumstances well—and were about to go back to school. A request to Rush Medical College to send Preston a first-class physician was answered by the arrival of Dr. John A. Ross. Educated in the best medical schools of Britain and America; tall and fine looking, with clear blue-gray eyes, wavy brown hair brushed back from the temples and up from the broad forehead, a mustache and a small flowing beard, narrow and short, that did not conceal the strong lines of the jaw; carefully groomed, and dressed in the formal costume he always affected: a fine broadcloth suit with velvet vest and double-breasted coat and a deep-bosomed white shirt, worn with three studs, stiff collar and dark tie; wearing a high hat and carrying a beautiful mahogany cane, Dr. Ross was a new type in the settlement that was made up for the most part of rugged pioneers. His cane, presented by fellow physicians in Chicago at a banquet given in his honor just before his departure for Minnesota, had an ivory handle and bore a gold band that was inscribed in commemoration of the occasion and in token of his excellent scholastic record. Perhaps the form of the gift was inspired by the tradition of the gold-headed cane of Dr. John Radcliffe (1650-1714); perhaps a cane was merely the currently favored accessory of a dignified young physician accustomed to urban life.

In Preston Dr. Ross was well received. From the first the many Scotch settlers in the community "loved him to death and would not let him leave," and he soon won the confidence of all, regardless of nationality or religious belief. The parish priest within a short time instructed his parishioners to call only Dr. Ross, for the reason, again a comment in reminiscent vein, that certain other physicians made mistakes as to their patients' tenure of life and caused the priest to administer extreme unction unnecessarily. Dr. Ross, skilled in diagnosis and prognosis, made few errors. If he considered that there was hope of pulling a patient through, he would not leave until the outcome was sure, remaining several days if necessary; if he was convinced that the case was hopeless, he would not waste time but would go on to some one who could be helped, and it is remembered that his judgment was sound and that it was honored.

On May 3, 1869, before Dr. O. A. Case had gone to further his medical education, as has been told, Dr. Case and a few other local practitioners organized the Fillmore County Eclectic Medical Society in Preston, and of this group Dr. Ross soon after his arrival became an active member. For several years he was its secretary and in 1876 served as vice president; by that time the activities of the society were dwindling and soon after the association disbanded. There is no reason to wonder why a man of Dr. Ross's training at the medical schools of Glasgow, Edinburgh and Rush and therefore ostensibly of the regular school of medical thought, should have allied himself with an eclectic medical group, especially when the Fillmore County Medical Society, founded in 1866, was functioning.

In the interest of his profession Dr. Ross, in addition to identifying himself with medical organization, early began his life-long custom of writing for medical journals and also acted as preceptor. In 1870 he took into his office as a student, George A. Love, who was preparing for matriculation at the Bennett Eclectic College of Medicine and Surgery in Chicago. There is an interesting note from the *Preston Republican* of May 30, 1873, that Dr. Ross, assisted by Dr. H. Jones, in the presence of Mr. Love, a medical student,

performed a postmortem examination; an infant daughter of local people had died of cerebrospinal meningitis. "The facts disclosed by the postmortem examination warrant us in saying that the parents, by overcoming the usual prejudice, did the public and medical profession a great service by permitting it to be done." In 1874, when Dr. Love was graduated, he returned to join Dr. Ross, as stated previously, in a partnership that was to last two years. The following card appeared in the *Fillmore County Republican* of January 8, 1875:

> Ross and Love, Physicians and Surgeons, Preston, Minnesota.
> Office on Main Street — Just in rear of post office.
> Open day and night. — All calls promptly attended to.

Dr. Ross took a friendly as well as a professional interest in his community, entering into social and civic activities and joining fraternal organizations, among them the Masons (A. F. and A. M., Royal Arch Chapter No. 32) and the Independent Order of Odd Fellows.

The life of this well-endowed physician of great promise was tragically short. In 1877, after two years of disability and suffering from heart disease, Dr. Ross died in Preston at the early age of thirty-six years, leaving his young wife; there were no children. He had been married two years previously, on March 5, 1875, after a romantic courtship, to Julia Ann Kaercher, the daughter of John Kaercher, a leading citizen of Fillmore County, in Fillmore, Chatfield, Preston and Clear Grit (which he founded). In later years Julia Kaercher Ross was married to Mr. Dibble; there were two children of the marriage, Sarah and Arthur, of whom the latter became a lawyer. After the death of her second husband she was married to Dr. Hickman. Of the third marriage there were four children; a son, Beryl, who died in infancy, and three daughters, Lola, Rachel and Ruth. Ruth Hickman Campbell has named her son John Angus, in honor of John Angus Ross.

In the histories of Fillmore county published in 1882 and 1912, tribute was paid to Dr. Ross as an esteemed and valuable citizen of Preston who was known for his kindness and liberality. "He was honest, plain-spoken, open-handed and just."

(To be continued in November issue)

President's Letter

LOCAL HEART ASSOCIATIONS

Until June of this year, the American Heart Association was an organization composed of physicians whose chief purpose was the study and dissemination of knowledge among physicians concerning the science of cardiology and the treatment of cardiovascular disease. It had conducted an annual scientific meeting each year in conjunction with the American Medical Association and had published *The American Heart Journal.* During recent years it had become apparent to the officials of this organization that the problem of diseases of the heart and blood vessels must be attacked on a much greater scale and, finally, at meetings at the various local heart associations, then established, in San Francisco in June, 1946, it was decided to enlarge the aims of the American Heart Association greatly and to revise its administrative structure completely. A committee was authorized to prepare a new constitution and to present it to the Board of Directors at the meeting of the American Heart Association which was to be held in Atlantic City in June, 1947.

When the American Heart Association met this year, the new constitution and by-laws were adopted. Now, the governing board of the American Heart Association is known as the "Assembly" and it consists of not more than 150 members. Of this number, not more than half may be individuals who are not physicians. It is provided that for purposes of representation the United States and Canada will be divided into six geographic regions and seventy-five members of the Assembly will be chosen "on a regional basis." Members of the Assembly who are physicians and members who are not physicians will have an equal voice when policies of the Association are being determined. Groups of physicians interested in special phases of cardiovascular disease, such as peripheral vascular disease, hypertension and arteriosclerosis, will be accorded representation in the Assembly. For example, it is provided that five members of the Assembly shall be elected by the American Council on Rheumatic Fever.

In order to implement the activities of the national body, it was decided that local heart associations should be formed throughout the country as rapidly as possible. The American Heart Association prefers that these local units be organized on a statewide basis and that subdivisions be created in each state in accordance with existing facilities and needs. Many such local heart associations are being formed throughout the country and hereafter membership in the American Heart Association will be obtained through membership in the local heart associations.

The over-all objective of the American Heart Association is to mobilize all resources, on a national scale, in an attempt to combat diseases of the heart and blood vessels more effectively. In order to accomplish this purpose, the national organization formulated certain definite plans. The public must be educated concerning the prevalence of diseases of the heart and blood vessels. It must be informed concerning prevention of heart disease and concerning the treatment and management of those who become its victims. It must know enough about the symptoms of heart disease to be able to consult physicians early. Research must be fos-

tered, and in order to sponsor research money is needed. A tragically small amount has been spent heretofore in research. Because of the need for money to accomplish the plans including the promotion of research, it is proposed that a national campaign for funds will be made during the week of Saint Valentine's Day in February, 1948. That week of each year will be designated as "Heart Week" and during it nationwide publicity will be sought through the radio, newspapers, magazines, motion pictures and other publicity mediums. The American Heart Association calls especial attention to the fact that a "very high percentage" of the funds which are raised will be retained by the local associations for the purpose of promoting research and providing facilities for treatment and management of patients suffering from heart disease in the various localities.

An important function of the local associations will be the education of the lay public. They will show that some forms of heart disease are reversible; others can be arrested and many individuals suffering from heart disease can lead useful, comfortable and fairly long lives, despite their physical limitation. This information will be released through lay educators, such as teachers, physical education instructors, social workers, public health nurses and ministers. Physicians will receive advanced instruction by means of refresher courses and lectures by outstanding authorities. Also the local heart associations will stimulate communities to provide an adequate number of beds for patients who suffer from acute and chronic phases of heart disease. They will see that sufficient nurses and physicians are available. They will provide for the rehabilitation of patients who have heart disease. This phase of their activities will require the assistance of occupational therapists and vocational guidance and often psychologic rehabilitation will be needed. The local heart associations have been termed the "task forces in this crusade" of the American Heart Association.

In Minnesota much interest has been shown by the American Legion, and farm, labor and industrial organizations. The Variety Club has provided funds for a heart hospital on the campus of the University of Minnesota.

The Council of the Minnesota State Medical Association has approved the organization of the Minnesota Heart Association. Temporary officers were elected at a meeting of representatives of industrial, labor and farm organizations and members of the medical profession, held in Saint Paul on July 24. These officials are preparing articles of incorporation and a constitution and by-laws at this time which will provide for statewide representation drawn from members of the medical profession and persons who are not physicians. Soon a permanent organization will be established.

Probably one of the prime functions of this organization will be to enlighten the public regarding the significance of this program. Soon people will be made to realize that one out of three people dies of diseases of the heart and blood vessels and that these diseases account for more deaths than the next six greatest causes of death. It should not be difficult to arouse public support for this outstanding health program.

Louis A. Buie

President, Minnesota State Medical Association

Editorial

CARL B. DRAKE, M.D., *Editor;* GEORGE EARL, M.D., HENRY L. ULRICH, M.D., *Associate Editors*

ACRES OF DIAMONDS

IN the October number of *Pic* appears in full the famous lecture entitled "Acres of Diamonds,"* first delivered years ago at the reunion of Civil War comrades by Dr. Russell H. Conwell, the philanthropist and founder of Temple University in Philadelphia. This inspiring lecture is said to have been delivered over 6,000 times and to have been a source of inspiration to countless individuals who have heard it.

The title is derived from a story told Dr. Conwell in 1870 by a guide on the Euphrates River about a Persian who left his home on the River Indus in a vain search of wealth, when the bed of the stream that flowed in his own yard was covered with diamonds. This is his thesis—that wealth is at your doorstep in this free country of ours and is the reward of the industrious and deserving. He decries the idea that there is something iniquitous in the search for wealth and points out that, according to the Bible, "the *love* of money is the root of all evil" and not money itself. With the acquisition of money comes the power to do good—for your family, friends, community and the world in general. He decries anything that stands in the way of the development and reward of private initiative, be it employer or union, which by standardization of wages prevents compensation commensurate with one's worth.

Apparently, there was a need for such an inspirational speech over the period of years during which Dr. Conwell gave this "Acres of Diamonds" speech. He died in 1925. During these years, Americans with freedom and opportunity, some spurred on by this speech, attained undreamed wealth for themselves and their countrymen. Has this period come to an end?

We have heard of pessimists who as far back as a hundred years ago predicted that no longer could wealth be acquired in our country, only to be proven wrong. We do not wish to be added to the list.

We believe that the present supplies many opportunities for acquiring wealth on the part of those with industry and faith in the future. We maintain, however, that man-made barriers in recent years have removed much of the incentive that was formerly present. The widening of the field of government spending before the war, greatly increased of necessity during the war, and new fields which have opened to replace those contracted during the postwar period—some necessary in the name of humanity, some indicative of the socialistic trend in government and some gross extravagance—have necessitated such an increase in income and inheritance taxes and have resulted in such poor returns from investments that the money incentive to increase production is well nigh gone.

We wish everyone could read "Acres of Diamonds" in order to experience the exhileration it produces in the reader's soul to think that he lives in a country like ours, so rich in opportunities. Certainly, patriotic and thoughtful readers cannot fail to feel that everything must be done to maintain our system of private enterprise in spite of socialistic tendencies in the rest of the world to restore the incentive to work by reducing taxation and government spending. If the country goes to work, supply will more nearly meet demand, and the cost of living will begin to go down, to the benefit of everyone. Concealed or obvious taxes are contained in the cost of everything we purchase today.

*The lecture plus the story of Dr. Conwell's life was compiled into book form by Harpers.

AMA FELLOWS

POSSIBLY one in ten physicians in the state understands clearly the difference between being a member of the American Medical Association and being a Fellow in the Scientific Assembly of the AMA. Each active member of a county society is enrolled automatically as a member of the AMA. He pays county and state dues but pays no dues to the national organization. Although the AMA has the right, according to its constitution, to assess each member up to ten dollars, if necessary, this prerogative, to our knowledge, has never been exercised. The AMA derives its income largely from its publications and the commercial displays at its meetings.

It is, therefore, logical for the AMA to insist that only those who support the scientific activities of the Association by subscribing to *The Journal of the American Medical Association* or one of its publications and becoming enrolled as a Fellow can register or take part in scientific discussions at the annual meetings. Simply being a member, with or without subscribing to an AMA publication does not automatically make one a Fellow. Application for Fellowship must be made by members who are not already Fellows as attested by the Fellowship card received yearly from the AMA. Fellowship dues, in the sum of eight dollars, should accompany the application. This amount includes the subscription price of *The Journal.*

Perhaps 20 per cent of members of the Minnesota State Medical Association are not AMA Fellows. Some of these subscribe to *The Journal* and can become Fellows without additional expense by simply applying to the AMA. Those who do not subscribe to one of the AMA publications should support the national association by so doing and should become Fellows.

Aside from qualifying a member to register at an annual AMA meeting, there are certain additional advantages to being a Fellow. In case one moves to another state, a Fellow is eligible to membership in the component society of his new location on presentation of a transfer card. If, however, he does not join the association in the state to which he moves, he forfeits his AMA Fellowship. One who has been a Fellow for fifteen years, has reached the age of sixty-four and is an honorary member of his component society, or the equivalent whereby he does not pay dues, may be elected to Affiliate Fellowship in the AMA by the House of Delegates. As an Affiliate Fellow he will not be required to pay dues; neither will he continue to receive the journal, except upon paid subscription.

A PHYSIOLOGIC APPROACH TO CARDIOVASCULAR ROENTGENOLOGY

(Continued from Page 1048)

A. Gordon; Drs. S. Dack and D. Paley; Drs. F. H. King and B. Schwartz; Drs. A. Grishman and M. F. Steinberg; Dr. S. Feitelberg and Mr. J. Hay.

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MEDICAL ECONOMICS

Edited by the Committee on Medical Economics
of the
Minnesota State Medical Association
George Earl, M.D., Chairman

RISKS OF ADMINISTERING BLOOD PLASMA

Possibilities of disease transmission by the injection of human blood derivatives is re-emphasized in a recent report from the American Red Cross.

The report, released through the Minnesota Department of Health, comes from the Committee on Blood and Blood Derivatives of the American National Red Cross Advisory Board on Health Services, which recently reviewed accumulated reports on the administration of surplus dried blood plasma.

Although the Committee does *not* advocate the discontinuance of its use, it does recommend that all physicians consider carefully the potential risk to the patient in the administration of pooled plasma. Because of the possibility of disease transmission, plasma should be used chiefly for serious emergencies, the report says, when a need for it is clearly indicated and when safer agents such as whole blood or serum albumin are not available.

No Other Restrictions

There are no other restrictions on the use of dried human blood plasma. This plasma, derived originally from blood given by thousands of donors throughout the country, to help in the war emergency, has been returned as surplus to the American Red Cross. By agreement with the American Medical Association and the Association of State and Territorial Health Officers, it has been distributed to all state health departments for use in this country.

No longer needed for soldiers and sailors, this plasma is now intended to help save the lives of the people who so generously gave blood originally. It is available to all who request it, as long as it lasts. No charge is allowed for the plasma itself; and to avoid confusion, the Health Department suggests that hospitals might bill patients as follows:

Blood plasma—No charge
Plasma administration—(Prevailing fee)

The plasma is not intended solely for administering to indigents; nor is it to be kept in reserve for disasters. An ample reserve has been set aside for both of these purposes.

15,829 Units Distributed

Since March, 1946, the Minnesota Department of Health had distributed a total of 15,829 units of dried human blood plasma to physicians and hospitals throughout the state. Approximately 11,481 units of 500 c.c., and 4,348 units of 250 c.c. have been supplied between March, 1946, and August 1, 1947.

Co-operation of physicians is urgently sought both in reporting cases of disease apparently spread through plasma administration and in preventing any further spread.

According to the Red Cross Committee, physicians who see patients with hepatitis should make a habit of inquiring about the possibility of their having been injected with blood or its derivatives during the preceding six months and of reporting such cases to the state or territorial department of health.

Furthermore, the Committee recommends, no matter how well a person looks or feels, he should *not* serve as a blood donor if (1) he has been hospitalized during the previous six month, particularly if he has received injections of human blood, blood plasma or serum within that period and if (2) there is a history of jaundice among members of his family or household within the preceding six months' period.

SOCIAL SECURITY MISSION TO JAPAN QUESTIONED

Motives prompting the dispatch on August 28 of certain officials from the Federal Security Administration and the U. S. Public Health Service

to Japan "to advise the Japanese government with reference to the co-ordination and application of social security measures" are under heavy fire in Washington.

The big question being asked is this: Does this social security mission to Tokyo represent simply a response to a normal request from the Supreme Command for the Allied Powers in Japan for help in rebuilding the Japanese Government on a sounder basis, or is it an attempt to "put over" a socialistic system in that country?

This question is being posed by the same investigating subcommittee which, under the guidance of Representative Forest A. Harness (Republican, Indiana), recently uncovered a misuse of funds by six agenciees of the executive branch of the U. S. Government for propaganda activities supporting compulsory national health insurance.

Defenders of the mission to Japan maintain there is a very simple explanation for the whole procedure. It all began, they relate, with a request last April from General Douglas MacArthur, Supreme Commander for the Allied Powers, that Mr. Arthur J. Altmeyer, Commissioner of the Social Security Administration, be invited to head a six-man mission to Japan for a period of thirty to ninety days to evaluate and make recommendations for achieving a sound social security system for Japan.

To Help Draft Health Bill

These men are to consult with the Public Health and Welfare Section of the Occupational government (the SCAP) and will offer technical guidance to the Japanese Committee on Social Insurance and the Japanese Council on Medical Care, presently engaged in drafting a co-ordinated national health bill.

Apparently General MacArthur did make this request, although the Harness Investigating Committee insists that they have never seen such a request. What arouses suspicion is the fact that the persons being sent to Japan by the War Department are merely, in the General's own words "presumed to be qualified" since they are "responsible public officials."

This fact has prompted the Harness Committee to probe further into their backgrounds. Each man who will work with Altmeyer is known, according to the Harness Committee, to have an "ideological attachment" to a national health program of the Wagner-Murray-Dingell type. The inference from this is that they were picked for their political convictions and not for their professional competence as health or social security advisers.

Four members of the mission have already been flown to Japan by the War Department. Mr. Altmeyer and two other men will join them later. The advance guard includes Dr. Joseph W. Mountin and Mr. Burnet M. Davis of the U. S. Public Health Service; Mr. Barker S. Sanders, Social Security Administration, and Mr. Francis A. Staten, Public Housing Authority.

See Danger to Medicine

The Harness Committee sees imminent danger in this social security mission, pointing out that if it is carried through, it may establish a precedent for controlling the medical profession in other countries. The selection of the experts by persons known to favor the nationalization of medicine leads the Committee to suspect an attempt is being made to find a "likely spot" to plant the seeds of a socialistic system in view of the fact that such plans have so far failed in this country.

The Committee doubts that MacArthur had any real knowledge of the composition of the mission or of the reputation of its members. It may be that he was guided by recommendations from the War Department, which may in turn have been guided by someone else—someone with strong socialistic leanings. Such is the contention of the Investigating Committee. For this reason, the Committee requested that the departure of the mission be delayed pending further investigation. The request was denied, and the mission left as scheduled.

AMA "GRASS ROOTS CONFERENCE" HAILED AS DECIDED SUCCESS

The first national meeting of county medical society officers, held in connection with the AMA Centennial Convention in Atlantic City, has been hailed as a decided success. The conference, which has been aptly named the "Grass Roots Conference," has been accorded the wholehearted approval of the AMA House of Delegates, and a continuation of these conferences has been recommended.

Employing the question-and-answer method of discussion, with the county officers themselves supplying the questions, delegates exchanged ideas

on a variety of medical economic subjects. A panel of experts was on stage to provide facts in answer to the specific questions and to keep the discussions going.

The enthusiasm shown by the delegates and their active participation in the discussions resulted in the coverage of only seventeen major questions from a list of seventy-eight submitted by the county officers.

Receiving most attention were the questions dealing with rural medicine, with the status of the general practitioner in relation to the hospital and the specialist, and with the public relations of the county medical society.

Discuss Physician Shortage

The shortage of physicians, particularly in the rural areas, it was agreed by the delegates, is a number one problem, the remedy of which is the dual responsibility of the public and the profession. The growing interest on the part of rural people to do something about it was noted, together with the firm resolve of organized medicine itself to do its share, by Dr. L. W. Larson of Bismarck, a member of the panel by reason of his work on the AMA Committee on Rural Medical Service.

"Medical schools," Dr. Larson pointed out, "have emphasized specialization in the years past, but there is now evidence to show that the trend is swinging back to more emphasis on the general practitioner. The tendency on the part of the larger rural hospitals to extend their facilities to surrounding territory is also in the right direction."

None of these things alone will solve the problem, he said. He expressed the belief that doctors themselves can do something within the county medical societies in rural areas, and he recommended that physicians help encourage bright young men who might be interested in medicine to get into the field and to settle in rural areas. The county medical society might also foster the development of local health councils in the county. Still another suggestion was the offering of practical help to the rural practitioner—that of making him feel that he, too, is important and that he has friends in the larger centers who stand ready to give him whatever advice or consultation he may need.

Dr. Norman M. Scott, medical director of the New Jersey Medical Surgical Plan, also a panel member, cited another problem particularly applicable in rural areas, that of rural enrollment in prepayment medical care plans. His conclusion was that since such insurance is most successful when written on the group basis, that the solution for the spread of these plans in rural areas is to organize farmers into groups.

Preserve the Family Doctor

If we do not protect the status of the general practitioner our whole system of organized medicine is threatened. This statement was made by Dr. L. H. Bauer of Hempstead, N. Y., during the discussion of the specialist-general practitioner relationship, and it seemed to summarize the feeling of the entire group.

Various ways of preserving "the family doctor" were discussed. Suggestions included increasing hospital facilities to make general practice easier, revamping specialty boards, the establishment of general practice services in hospitals and increasing the number of postgraduate courses, slanted toward the needs of the general practitioner.

Indicative of the line of thought of the conference delegates were such statements as: "Hospitals are for the use of and not the convenience of the specialist"; "The general practitioner has no fight with the specialist—we need him as much as he needs us"; and "Credit should be given on the basis of proved ability to practice."

Some doctors objected to the name "general practitioner," advocating such titles as "general physician" or a return to the name "family doctor." The question of a specialty board for general practitioners was also brought up, but there was disagreement as to need for such a board or the advisability of it, since the original idea of a specialty board was not to make it difficult for a man not in a specialty, but to arrive at comparable standards for different specialties. To avoid unhappiness in the profession from inequality of opportunity, the House of Delegates has already recommended and the Hospital Association has accepted this statement as a guide in the matter of the specialty board: "The individual shall be qualified for a particular place by reason of his particular training and not because he has been certified by a board."

Public Relations Discussed

The proper share of public relations activity which should be assumed at the county society

level provided a subject for very active discussion at the Conference. A member of the panel, Dr. L. F. Foster, secretary of the Michigan State Medical Society, cited the development of social consciousness as an important consideration. The rugged individualism, typical of the medical profession, is being discarded, he said.

"Doctors are, in the eyes of the patients, great fellows," Dr. Foster said. "But these same patients seem to feel that medical associations exist for the doctors' own good and not to help the public. But as a corporate institution we are concerned with public welfare and must get this across to the public."

Mr. Thomas A. Hendricks, secretary of the AMA Council on Medical Service, a firm believer that "public relations begin at home," listed for the delegates what he called "the seven sins" to be avoided by a functioning local society: "inertia, reaction, cliques, discord, provincialism, smugness and defeatism."

"To offset these," he said, "the seven characteristics that mark a good medical society are: enterprise, progress, friendship, harmony, vision, leadership and courage."

PNEUMONIA IMMUNIZATION CUTS DEATH RATE OF OLDER PERSONS

A group of New York investigators who made a six-year study of pneumonia in elderly patients, suggest immunization against the disease where high incidence rates prevail, as in epidemics, in institutions, and in persons with a tendency to recurring pneumonia.

Writing in the current issue of the *Archives of Internal Medicine*, published by the American Medical Association, the investigators—Paul Kaufman, M.D., attending physician, Goldwater Memorial Hospital and New York City Home; C. O'Brien, M.D., resident physician and H. Stein, M.D., resident physician, New York City Home—state that they undertook their study in the older age group for several reasons:

First, they have a high incidence of pneumonia, mortality and case fatality rate. Second, repeated attacks of pneumonia occur frequently. Third, there was possibility for continuous observation, hospitalization, and re-examination, since the patients were from the New York City Home and the Medical Division of the former Central and Neurological Hospital and the Goldwater Memorial Hospital, where higher age groups are treated.

During the six-year study, 1937 to 1943, 5,750 patients were immunized against pneumonia, while 5,153 control patients were observed for comparison. Among the immunized group, 99 developed pneumonia, an incidence rate of 17.2 per 1,000, of which 40 died, a mortality rate of 6.2 per 1,000. There were 227 cases of pneumonia among the nonimmunized patients, an incidence rate of 44 per 1,000 with 98 deaths, a mortality rate of 19 per 1,000.

The antigen used in these experiments for immunization is made from a fraction of the pneumococcus, the organism responsible for pneumonia. The antigen, which incites production by the body cells of a substance to fight the bacteria, is a polysaccharide.—*American Medical Association News*, July 11, 1947.

MINNESOTA STATE BOARD OF MEDICAL EXAMINERS

230 Lowry Medical Arts Building
Saint Paul, Minnesota

Julian F. Dubois, M.D., Secretary

Elkton, South Dakota, Man Sentenced to Three-year Prison Term for Abortion

Re. State of South Dakota vs. Herman V. Feenstra

On August 19, 1947, Herman V. Feenstra, seventy-three years of age, of Elkton, South Dakota, entered a plea of guilty in the Circuit Court at Brookings, South Dakota, to a charge of performing an abortion. Feenstra was sentenced to a three-year-term in the South Dakota State Prison, and is to receive credit for three months that he was confined in the Brookings County Jail following his arrest in May of this year.

Feenstra, who formerly represented himself as a chiropractor, was arrested on May 20, 1947, following the hospitalization of an eighteen year-old Lake Benton, Minnesota, girl at the Hendricks, Minnesota, hospital. The matter was immediately called to the attention of the Minnesota State Board of Medical Examiners, and through the splendid co-operation of the attending physicians, it was learned that the patient had gone to Feenstra on May 2, 1947, for the purpose of having an abortion performed. Feenstra inserted a catheter and was paid $50.00 for his services. The patient became seriously ill and was hospitalized on May 9, 1947, in the Hendricks Hospital.

Feenstra is well known to the South Dakota and Minnesota authorities. On August 10, 1938, Feenstra was sentenced to a four-year prison term in the District Court at Glencoe, Minnesota, following his plea of guilty to a charge of criminal abortion. On November 21, 1938, Feenstra was returned to the District Court at Glencoe, Minnesota, from the State Prison, and sentenced to a term of two to eight years because the investigation, at that time, disclosed that Feenstra had a prior conviction in the Circuit Court at Brookings, South Dakota, for a similar crime. The records of the Circuit Court at Brookings, South Dakota, also show that Feenstra forfeited a $2,500 cash bond in that Court, on January 19, 1938, at which time he was under arrest on a charge of rape. Feenstra has resided at Elkton, South Dakota, for the past thirty years. Prior to that time he operated a cafe at Lake Benton, Minnesota. He then worked as a painter, following which he claims that he studied chiropractic at Davenport, Iowa. Feenstra has never held any license to practice any form of healing in the State of Minnesota.

The Minnesota State Board of Medical Examiners wishes to acknowledge the very fine co-operation that it received in this case from the physicians who took care of the patient while she was hospitalized at Hendricks, Minnesota. The Medical Board also wishes to make known the prompt and efficient services rendered by Mr. W. R. McCann, States Attorney, and Sheriff J. M. Rishoi, both of Brookings, South Dakota.

Reports and Announcements

RESEARCH FELLOWSHIPS

The Surgeon General of the U. S. Public Health Service has been authorized to establish and maintain research fellowships intended to promote the training and development of investigators in the field of medicine and related sciences. Between January 1, 1946, and August 31, 1947, a total of $10,214,174 was made available to investigators in twenty-three different study sections. Research in syphilis received $1,669,793; in cancer, $1,241,510; in physiology, $676,836; in biochemistry and nutrition, $682,358; in malaria, $543,208; in virus and rickettsial diseases, $509,556—to cite the largest grants-in-aid.

The sums are devoted to fellowships, ranging from $1,200 to $3,000 per year, awarded to those with bachelor's, master's or doctor's degrees. The fellowships are for one-year periods, but may be renewed.

Application forms for research fellowships may be obtained from the Division of Research Grants and Fellowships, National Institute of Health, Bethesda 14, Maryland. Applications must be supported by a statement from the department head of the university under whom the fellowship work is to be conducted.

MARKLE FOUNDATION POST-FELLOWSHIP GRANTS

The John and Mary R. Markle Foundation, 14 Wall Street, New York City, has announced that grants of $25,000, payable at $5,000 per year for five years, will be available beginning in the school year 1948-49 to accredited medical schools for the specific purpose of aiding embryo research workers in preclinical and clinical subjects. The grants will total $1,250,000 over the five-year period.

The purpose of the program is to meet the need for financial assistance for young medical students who have completed residencies and have the desire and ability to enter research and teaching. Candidates will have had training in some special field to qualify them to receive a faculty appointment and to conduct original research.

The program is the result of a survey which showed that while there are scholarships and other forms of financial aid for the student in the course of his scientific training and for the scientist once his name is made, there are few sources of help at the beginning of the career of the man who chooses academic medicine.

Persons interested in being considered as candidates are referred to the deans of accredited medical schools for further information.

UROLOGY AWARD

The American Urological Association offers an annual award of $1,000.00 (first prize of $500.00, second prize $300.00 and third prize $200.0) for essays on the result of some clinical or laboratory research in urology. Competition will be limited to urologists who have been in such specific practice for not more than five years and to residents in urology in recognized hospitals.

The first prize essay will appear on the program of the forthcoming meeting of the American Urological Association, to be held at the Hotel Statler, Boston, Massachusetts, May 17-20, 1948.

For full particulars write the secretary, Dr. Thomas D. Moore, 899 Madison Avenue, Memphis, Tennessee. Essays must be in his hands before March 1, 1948.

AMERICAN ACADEMY OF ALLERGY

The American Academy of Allergy will hold its annual convention at Hotel Jefferson, St. Louis, Missouri, December 15-17, inclusive. All physicians interested in allergic problems are cordially invited to attend the sessions as guests of the Academy by registering without payment of fee. The program, the scientific, and technical exhibits have been arranged to cover a wide variety of conditions where allergic factors may be important. Papers will be presented dealing with the latest methods of diagnosis and treatment as well as the results of investigation and research. Round table conferences will be held on Monday afternoon, December 15, 1947. Advance copies of the program may be obtained by writing to the chairman on arrangements, Charles H. Eyermann, M.D., 634 North Grand Boulevard, St. Louis, Missouri.

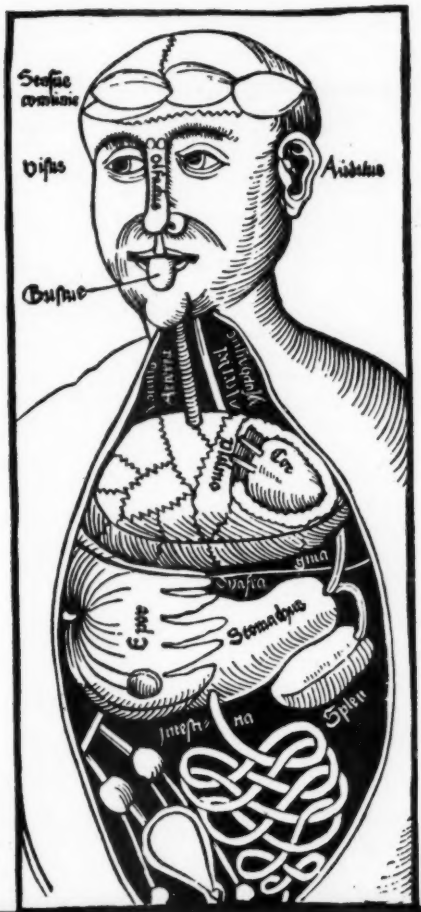
AMERICAN COLLEGE OF SURGEONS

Thirty-two Minnesota physicians were accepted into fellowship in the American College of Surgeons at its thirty-third convocation in New York on September 12.

The Minnesota initiates are Doctors B. Marden Black, Rochester; Theodor E. Bratrud, Thief River Falls; C. Kenneth Cook, Saint Paul; Henry C. Dahleen, Rochester; Charles T. Eginton, Saint Paul; Benjamin A. Gingold, Minneapolis; Gilman H. Goehrs, St. Cloud; Harry P. Harper, Minneapolis; Albert T. Hays, Minneapolis; Gustaf A. Hedberg, Nopeming; Arthur B. Johnson, Minneapolis; Carl E. Johnson, Saint Paul; Edward S. Judd, Jr., Rochester; Leonard L. Kallestad, Brownton; Bernard G. Lannin, Saint Paul; Clarence M. Larson, Minneapolis; Paul R. Lipscomb, Rochester; Donald C. MacKinnon, Minneapolis; Orval L. McHaffie, Duluth; John C. Mickelson, Mankato; Daniel J. Moos, Minneapolis; Harvey Nelson, Minneapolis; Maynard C. Nelson, Minneapolis; Arthur H. Pedersen, Saint Paul; Nathan C. Plimpton, Jr., Minneapolis; Harold A. Reif, Minneapolis; Frank H. Russ, Rochester; Oliver E. Sarff, Duluth; James S. Spang, Duluth; David State, Minneapolis; William B. Stromme, Minneapolis, and H. Herman Young, Rochester.

(Continued on Page 1088)

Anatomic woodcut:
Title page from
Pyligk Compendium;
1516—Courtesy,
The Bettmann Archive



IN 1516:

Anatomic illustrations were crude; knowledge of the anatomy and the treatment of diseases of the heart and thoracic organs were extremely limited.

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SEARLE RESEARCH IN THE SERVICE OF MEDICINE

(Continued from Page 1086)

OMAHA MID-WEST CLINICAL SOCIETY

The fifteenth annual assembly of the Omaha Mid-West Clinical Society will be held October 27 to 31, 1947, at the Hotel Paxton in Omaha.

This midwest medical meeting has become one of the larger and more important sectional meetings of the country. Distinguished visitors will participate in the extensive program which includes the various specialties.

A program may be obtained from Dr. J. M. Thomas, Secretary, 1031 Medical Arts Building, Omaha 2, Nebraska.

SOUTHERN MINNESOTA MEDICAL ASSOCIATION

Dr. C. L. Sherman, Luverne, was elected president of the Southern Minnesota Medical Association at the annual meeting held in New Ulm on September 8.

Other officers elected at the meeting were Dr. Lewis I. Younger, Winona, first vice president, and Dr. Carl Fritsche, New Ulm, second vice president. Dr. W. A. Merritt, Rochester, was re-elected secretary-treasurer.

Winona was selected as the convention city for 1948.

SOUTHWESTERN SOCIETY

The August 25 meeting of the Southwestern Medical Society was preceded by a dinner at the Worthington Country Club, attended by members of the society and their wives. After the dinner, the women were entertained at the home of Dr. and Mrs. B. O. Mork, Jr., while the society members conducted the regular meeting at the club. The principal features of the evening program were reports by Dr. S. A. Slater, Worthington, and Dr. D. J. Halpern, Brewster, who were delegates to the annual meeting of the Minnesota State Medical Association in Duluth in June.

WASHINGTON COUNTY SOCIETY

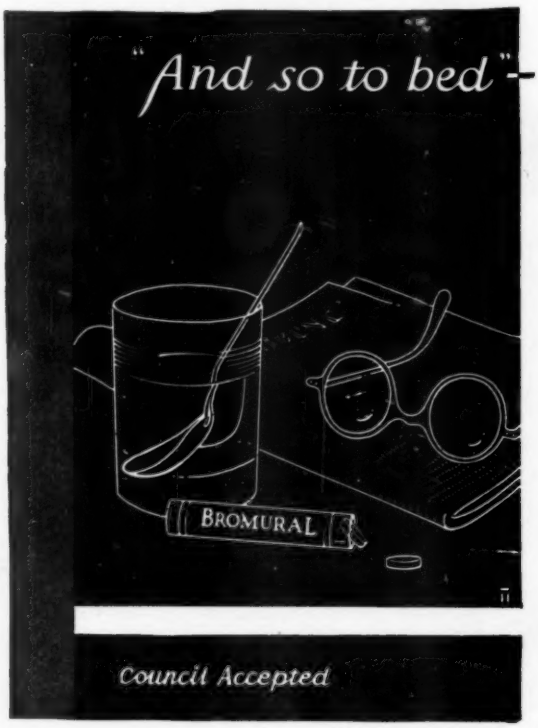
At the monthly meeting of the Washington County Medical Society, held in Stillwater on September 9, the guest speaker was Dr. Benjamin Sommers, Saint Paul, who spoke on "Treatment of Congestive Heart Patients."

Dr. Edgar C. Burseth, an associate of Dr. George M. Ruggles of Forest Lake, was elected a member of the society. A visiting guest at the meeting was Dr. Lucien Culver, Saint Paul, who formerly practiced in Stillwater.

MINNESOTA SOCIETY OF ANESTHESIOLOGISTS

All physicians interested in ansethesia and related subjects are invited to attend the second meeting of this Society Saturday evening, November 15, 1947, in Minneapolis.

For exact time, place and program, address Dr. J. W. Baird, Committee Chairman, University Hospitals, Minneapolis 14, Minnesota.



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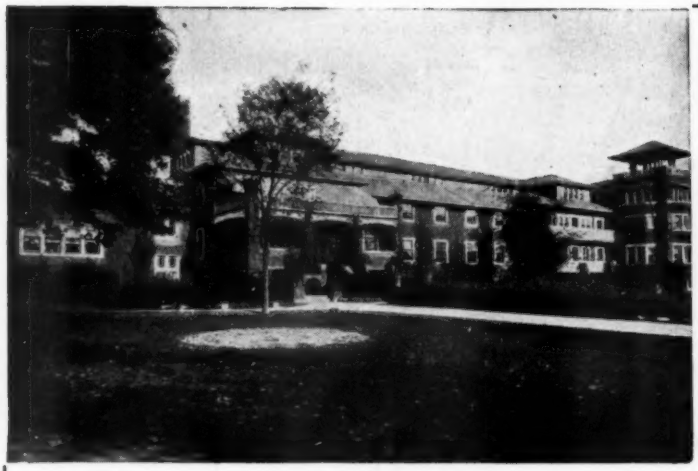

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WOMAN'S AUXILIARY

Upper Mississippi Auxiliary

The Woman's Auxiliary to the Upper Mississippi Medical Society were hostesses to the auxiliary members of the Northern Minnesota Medical Society at the convention on September 6, 1947. Approximately sixty members and friends registered and were guests of the Brainerd doctors at a luncheon in the main dining room of Breezy Point Lodge, where the convention was held.

In the afternoon the ladies participated in bridge and a social hour, and were served refreshments by the Brainerd doctors' wives. Mrs. J. A. Thabes, Sr., president of the state auxiliary, was an honored guest. There was a banquet in the evening for the doctors and their wives, at which Governor Youngdahl was the principal speaker.

Range Auxiliary

Members of the Range Medical Association Auxiliary held a joint session with members of the Medical Association at a dinner meeting in the Elks Club, at Eveleth in September. Auxiliary guest speaker was Margaret Moore, who gave a talk on her recent trip to Mexico, illustrated with motion pictures.

Mrs. Robert L. Bowen, president of the Auxiliary, represented her group at a tea which the women's organizations of Eveleth sponsored, following a public relations talk on various phases of socialized medicine given at the Little Theater of the Memorial Building on October 9. In the evening the Range Medical Association and Auxiliary members were hosts at a dinner for the St. Louis County Medical Society.

October 23 has been slated for the Auxiliary rummage sale to raise funds for the nursing scholarship at Hibbing General Hospital, which the organization is sponsoring. The Range Auxiliary embraces members from Hibbing, Chisholm, Buhl, Nashwauk and Keewatin.

SICKNESS STATEMENTS FOR RAIL WORKERS

Physicians throughout the nation are being asked to furnish medical evidence to substantiate the claims of railroad workers who may now draw cash sickness benefits under the Railroad Unemployment Insurance Act. The Railroad Retirement Board pointed out that unless an application is mailed not later than the seventh day after the first day of sickness claimed, it may not be received within the legal time limit for filing applications. As a result, the employe may lose one or more days' benefits. Physicians are asked either to return each completed Statement of Sickness to the patient, or mail it promptly to the office of the Board to which it is addressed.

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BRANCHES AT LOS ANGELES AND DALLAS

In Memoriam

JOHN A. DUFFALO, JR.

Lieutenant Commander John A. Duffalo, Jr., died suddenly at Oakland, California, on July 6, 1947, at the age of thirty-one.

Born in Minneapolis, Dr. Duffalo graduated from the University of Minnesota Medical School in 1940 and joined the navy in 1942. He took part in battles at Okinawa, Iwo Jima, Leyte and Luzon as flight surgeon aboard the escort carrier, U.S.S. *Lunga Point.*

Dr. Duffalo is survived by his parents, his wife, Ellen, and a son, Bruce.

HAROLD F. DUNLAP

Dr. H. F. Dunlap, formerly of the Mayo Clinic, died July 22, 1947, at Indianapolis, Indiana.

Born in 1895 at Duncannon, Pennsylvania, Dr. Dunlap received his M.D. degree from Indiana University in 1920 and entered the Mayo Foundation as a fellow in medicine, January 1, 1922. In 1932, he left the Foundation and after a year of practice in New Jersey, went to Indianapolis, where he had practiced and served as associate in medicine at the Indiana University School of Medicine since 1934.

ROBERT K. GREEN

Dr. Robert K. Green, head of the Department of Bacteriology at the University of Minnesota medical school and well known nationally for his research work in virus diseases and cancer, died September 6, 1947, at the age of fifty-two.

Dr. Green was born at Wadena, Minnesota, January 11, 1895. He attended school at the University of Valparaiso (Indiana) and at International Falls before attending the University of Minnesota. There he received the degree of B.A. in 1919, M.A. in 1920, and M.D. in 1922. He was a member of Sigma Xi and an Honorary Fellow in the New York Zoological Society.

A decade ago, Dr. Green was credited with having saved the nation's fox industry by developing a vaccine to prevent fox encephalitis. A year ago, he introduced a revolutionary theory on the cause of cancer. At the time of his death, he was working on what he hoped would be a successful vaccine against poliomyelitis and an agent to immunize against cancer. He left his personal laboratory equipment to the University of Minnesota for the continuation of research.

Dr. Green's wife, the former Beryl Bertha Sparks, whom he married in 1917, died in 1941. A daughter, Gale, two brothers and five sisters survive him.

Dr. Green was a member of Hennepin County Medical Society, the Minnesota State and American Medical Associations, the Society of American Bacteriologists, the American Society of Mammalogists, the American Association of Immunologists and the Minnesota Academy of Medicine.

JULIUS F. GENDRON

Dr. Julius F. Gendron, a practitioner in Grand Rapids, Minnesota, since 1904, died September 11, 1947, at the age of seventy-nine.

Dr. Gendron was born at St. Francis de Montmagny in the province of Quebec on March 31, 1868. After studying law at Laval University, he came to Minnesota and decided to study medicine. He graduated from Hamline University medical school in 1896. He practiced medicine at Centerville, Minnesota, from 1896 to 1898; at Saint Paul, as an associate of Dr. Marquis from 1898 to 1899; at Crookston from 1899 to 1900; at Red Lake Falls from 1902 to 1904, when he located in Grand Rapids. He was health officer for Grand Rapids for a number of years before his death.

Dr. Gendron was well known in Canadian literary circles as a poet, doing his writing in French. He was once poet laureate of Canada. In 1928, he published a symbolic poem in French entitled "D'Oil." Several works in both verse and prose were never published. In 1930, he became a member of the Society of French Canadian Poets.

A member of the St. Louis County Medical Society, the Minnesota State and American Medical Associations, he served as a captain in the medical corps of the army in World War I. He is survived by his widow and a son, Bertrand Gendron, a druggist at Brainerd, Minnesota.

WILLIAM GINSBERG

Dr. William Ginsberg, for thirty years a practitioner in Saint Paul, died at the age of fifty-seven on September 21, 1947, at his home. He had retired from active practice three years previously because of ill health.

Born in Saint Paul, December 11, 1889, he was the son of Jacob and Mollie Ginsberg. He attended the University of Minnesota where he received his B.S. degree in 1914 and his M.D. degree in 1915. During World War I he served overseas as a first lieutenant in the Medical Corps. He had maintained his reserve commission as a major since that time.

After his return to practice, Dr. Ginsberg was a staff member of St. Luke's, St. Joseph's and Miller Hospitals. Early in his career he manifested a broad untiring interest in medical, civic and philanthropic activities, and although he included the entire gamut of community life, he had the sincerity and patience to master the details of the many institutions and causes with which he was affiliated. Nothing which was socially progressive or helpful was alien to his sphere.

He was one of only two life members of the Jewish Educational Center, of which he was one of the principal founders and first president. For many years he was active in Boy Scout Circles, serving as a member of the Executive Committee of the Boy Scouts of America, Saint Paul Area Council, and as chairman of

(Continued on Page 1094)

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IN MEMORIAM

(Continued from Page 1092)

the Leadership and Training Committee of the Saint Paul Area Council, Boy Scout Regional Executive Committee.

His memberships indicated the diversity and generosity of his interests. These included the Ramsey County Medical Society, Minnesota State Medical Association, American Medical Association, B'nar B'rith lodge of which he was a Past President, Masonic Lodge, American Legion, Jewish War Veterans, and Veterans of Foreign Wars. He was also a member of the St. Paul Refugee Service Committee, Refugee Affidavit Committe and the Conference of Christians and Jews. He was a member of the Board of Directors of the Jewish Home for the Aged, the Temple of Aaron Congregation, Central Hebrew School, St. Paul Zionist Organization, Jewish Welfare Board, United Jewish Fund and Council, Central Community House, Council of Jewish Social Agencies, the American Jewish Congress and chairman of the Local Theological Seminary.

On April 28, 1947, Dr. Ginsberg was chosen to represent the St. Paul Jewish physicians by signing a goodwill certificate which was sealed in the cornerstone of the new tuberculosis hospital, a unit of Hebrew University Hospital on Mount Scopus, Jerusalem.

He received an award from the Jewish War Veterans, naming him the outstanding Jewish citizen in 1942, recognition of a life of communal service and benefaction which won him the highest esteem, confidence and admiration of all.

He is survived by his sons, Dr. Robert L. Ginsberg and James P. Ginsberg of Saint Paul and Stanley Thomas Ginsberg of Oshkosh, Wisconsin, and three sisters, Annie and Lily Ginsberg and Mrs. Alex Mains, all of Saint Paul, and a brother, Dr. S. Theodore Ginsberg of Marion, Indiana.

BENJAMIN F. SMITH

Dr. B. J. Smith, formerly superintendent of the State Hospital at Rochester, Minnesota, died August 17, 1947, at Jackson, Louisiana, where he was superintendent of the Louisiana State Hospital.

Dr. Smith was born March 3, 1895. He received his B. A. degree from the University of Missouri in 1917 and his M. D. degree from Tulane University in 1919.

He came to Minnesota in 1922 as assistant physician at the St. Peter State Hospital and was superintendent of the Willmar State Hospital from 1927 to 1935 when he was appointed superintendent of the Rochester State Hospital. He left here in 1942 and later was superintendent at a hospital in Missouri before his appointment to the Louisiana State Hospital.

On June 15, 1920, at Neosho, Missouri, Dr. Smith married Stella G. Walters, who with three sons, Dr. B. F. Smith, Jr., of St. Louis, William, and George, survive.

Communication

To the Editor:

Dr. Kano Ikeda's criticism* of the edito ial "Laboratory Abuse" is gratefully acknowledged by the author.

The title of the editorial is unfortunate. It was not the author's choice. There was no allegation of abuse. Dr. Ikeda heartily agrees with the observation that the multiplicity of laboratory procedures may be a distinct danger to the clinical approach.

He does not agree with the idea of the partition of the economic load nor does he like the illustration of a cushion, i e., the State Board of Health Laboratories.

Besides the present multiplicity of laboratory procedures we add as an example the oncoming rush of requests for hormone levels in the blood or urine, the vitamin levels in body fluids, the various enzyme systems. Who is going to pay the technicians able to do these biochemical assays?

Again, every hospital the author has contact with, and every physician of his acquaintance uses the State Board of Health Laboratories for diagnostic purposes. The reason for this is obvious. Lack of facilities or economic pressure, or both, are the factors which have brought this about.

It was in that sense the author used the word "cushion."

HENRY L. ULRICH
Associate Editor

*See page 1011, September, 1947, issue.

SHOULD BUSINESS AND PROFESSIONS JOINTLY OPPOSE WELFARE STATE?

Industrialists and manufacturers show little inclination to oppose Federalization of medicine. The banker may think it is no worry of his if medicine is socialized. The physician may conclude he has nothing to lose if the Federal Government sets up sickness insurance benefits by diverting railroad unemployment insurance funds into strange channels. But the banker, the physician, and the manufacturer would do well to inquire if they are not all being threatened by various manifestations of a single movement. Schemes for socialization do not operate in an economic vacuum. They are well planned; they strike on many fronts. No one can predict which part of the economy will be taken over first when the Welfare State is established.—*Insurance Economics Surveys*, September, 1947.

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Robert Meller, M.D.....*Psychiatry*
C. O. Erickson, M.D.....*Psychiatry*
Donald Reader, M.D.....*Neurology*
N. J. Berkwitz, M.D.....*Psychiatry, Neurology*
Grace, Johnson, O.T.R.....
Occupational & Recreational Therapy
June McChord, B.A.....*Dietetics*
Marian Tucker, B.S.M.T. (ASCP).....*Bacteriology*
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Of General Interest

On September 25 the Freeborn County Medical Society met at Albert Lea and heard Dr. J. W. Pender, Rochester, speak on "New Drugs and Techniques for Anesthesia."

* * *

On August 27, Dr. B. M. Spock, Rochester, spoke on "The School-Aged Child" at a meeting of the Minnesota Conference of Child Caring Institutions, in Saint Paul.

* * *

President of the Northern Minnesota Medical Association is Dr. Charles W. Vandersluis, Bemidji, who was elected at the annual meeting at Breezy Point, September 6.

* * *

Dr. Lyman R. Critchfield and Dr. Edwin C. Burklund have announced their association in the practice of pediatrics and the removal of their offices to 1517 St. Clair Street, Saint Paul.

* * *

"Ulcerative Disease of the Bowel" was the title of a paper presented by Dr. P. W. Brown, Rochester, at a meeting of the Champaign County Medical Society in Champaign, Illinois, on September 18.

* * *

At a meeting of the British Association for the Advancement of Science, held at Dundee, Scotland, on September 1, Dr. Charles F. Code of Rochester spoke on "Man's Reaction to Centrifugal Force."

* * *

After practicing medicine in Northome for a year, Dr. B. G. Nelson closed her offices in that city on August 8. She planned to vacation for several weeks before opening a medical practice elsewhere.

* * *

The Minnesota Chapter of the American Medical Technologists elected Jack O. Kirkham, of the Estrem Clinic in Fergus Falls, president of the organization at the annual meeting in Minneapolis September 6.

* * *

Ten lectures entitled "Ophthalmology in General Medicine" were given by Dr. H. P. Wagener, Rochester, at an instructional course that started September 2 and was sponsored by the Ophthalmological Study Council at Portland, Maine.

* * *

In Chicago on September 8, Dr. J. Arthur Myers, professor of public health at the University of Minnesota, delivered an address at the Mississippi Valley Tuberculosis Conference. Dr. Myers was the retiring president of the organization.

* * *

A bust of Walter Reed will be placed in the New York University Hall of Fame, probably in May, 1948, when the Fourth International Congresses of Tropical Medicine and Malaria meet in Washington, D. C. At that time the British will pay honor to their great malariologist, Sir Ronald Ross.

* * *

It has been announced that Dr. Ralph R. Sullivan has resigned as director of venereal disease control and acting director of medical services for the Minneapolis Health Department. Dr. Sullivan will become venereal disease control director for Oregon.

* * *

Community Health Association in Two Harbors recently announced that Dr. E. Bryant Woods, an obstetrician and gynecologist from Tampa and Tarpon Springs, Florida, had arrived in the city to join the staff of the North Shore Clinic in Two Harbors.

* * *

Dr. O. W. Scholpp, Hutchinson, has purchased a corner lot in that city where he plans to have a new office building constructed sometime in the future. One feature of the new building will be a large x-ray room, arranged for ease and efficiency of operation.

* * *

At a tuberculosis conference in Chicago early in September, Dr. Ernest S. Mariette, superintendent of Glen Lake Sanatorium, participated in a panel discussion on ways and means of making nursing more interesting to prospective students.

* * *

Dr. Charles W. Rogers, former practitioner in Heron Lake, who recently completed postgraduate training in pediatrics at the University of Minnesota, is now specializing in pediatric practice as a member of the Winona Clinic in Winona.

* * *

"Exchange Transfusion" was the subject discussed by Dr. William Heilig, Northwestern Hospital, Minneapolis, at a meeting of the Twin City Society of Medical Technologists held in Saint Paul on September 10.

* * *

While Dr. M. H. Larson, Nicollet, was trying to dodge hurricanes and do some deep-sea fishing during his September vacation along the Gulf of Mexico, his medical practice back home was conducted by Dr. Leander Sjostrom of St. Peter.

* * *

"Emotional Conflicts and Their Relation to Sterility" was the topic presented by Dr. Gordon R. Kamman, Saint Paul, at the meeting of the American Congress of Obstetrics and Gynecology held in St. Louis, Missouri, on September 9.

* * *

Dr. G. M. Kelby, Minneapolis, has announced the association of Dr. Harry W. Mixer in the practice

(Continued on Page 1098)

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(Continued from Page 1096)

of radiology. Dr. Mixer, who is also an instructor in radiology at the University of Minnesota Hospitals, began his work with Dr. Kelby on August 15, 1947.

* * *

Dr. R. G. Tinkhman, who had been associated with Dr. John Eiler of Park Rapids in the practice of medicine and surgery since December, 1946, withdrew from the partnership in August but at the time was undecided as to where he subsequently planned to locate.

* * *

Dr. M. J. Schirber, who recently completed a two-year residency at St. Joseph's Hospital in Chicago, has become associated in the practice of medicine with Dr. M. J. McKenna, Dr. R. V. Jolin, and Dr. A. V. Grinley in Grand Rapids. Dr. Schirber is a graduate of Northwestern University.

* * *

On August 23, Dr. Roger G. Hassett, Mankato, suffered two fractured ribs when the automobile in which he was riding was struck by another car at a street intersection in Mankato. The only person injured in the accident, Dr. Hassett was believed to have been thrown forward against the dash board.

* * *

Two Thief River Falls physicians, Dr. Harold C. Johnson and Dr. C. A. Haberle, have announced their withdrawal from membership in a local clinic and have jointly engaged in general practice in a combined office in that city. They plan later to erect a clinic building in the business district of Thief River Falls.

* * *

In Sandstone on September 5, Dr. H. P. Dredge celebrated the forty-fourth anniversary of his arrival in the city. Forty-four years ago, Dr. Dredge stated, he arrived in Sandstone in a freight car, sleeping on a cot, surrounded by his household goods and a team of horses, but eager to open his medical practice.

* * *

At a meeting of the Cancer Institute, a division of the Iowa State Department of Health, held in Des Moines on September 23, Dr. D. O. Ferris of Rochester presented two papers, entitled "Carcinoma of the Kidney, Ureter and Bladder" and "Carcinoma of the Uterus." The meeting was sponsored by the Iowa State Medical Society.

* * *

Dr. Richard P. Griffin, who has been associated for the past year with Dr. I. L. Oliver at Graceville, recently opened a practice in the office of Dr. Oscar Daignault in Benson. A graduate of the University of Iowa in 1944, Dr. Griffin interned at Santa Rosa Hospital in San Antonio, Texas, before entering the navy for one year.

* * *

Recently discharged from the army, Dr. Gerald E. Bourget has become associated in practice with Dr. L. H. Rutledge and Dr. C. W. Moberg in Detroit Lakes. A graduate of the University of Minnesota

in 1944, Dr. Bourget served his internship at Western Pennsylvania Hospital in Pittsburgh before entering the army.

* * *

Results of the chest x-ray survey in Blue Earth County and North Mankato were reported at the annual meeting of the Blue Earth County Public Health Association by Dr. Hilbert Mark, director of the Tuberculosis Division of the State Board of Health, who was the principal speaker at the September 24 meeting in Mankato.

* * *

Dr. Robert E. Rocknem, who recently completed an internship at Minneapolis General Hospital, was married in Minneapolis early in September to Miss Margery Lou Hill, formerly of Veblen, South Dakota. A graduate of the University of Minnesota, Dr. Rocknem expected to be called to active duty in the army in late September.

* * *

An emergency health board was organized in Hibbing at a meeting on August 27. The group will work within the framework of the Community Fund to supply funds for emergency health cases where needy patients are concerned. Among the members of the board are Dr. Carlyle Tingdale, Dr. T. A. Estrem, and Dr. C. N. Harris, all of Hibbing.

* * *

On October 1, Dr. W. W. Canfield returned to Houston after almost four years of absence, and opened offices for his medical practice. Dr. Canfield formerly practiced in Houston from 1929 until January, 1944, when he entered military service. After his discharge from the army, he practiced medicine for a short time at Forest Lake and at Winona.

* * *

Dr. Percy T. Watson, Minneapolis, suffered bruises and an injury to his eye on the morning of September 8 when his automobile was struck on a highway near Rosemount by a car coming out of a blind crossing. Dr. Watson's car rolled over twice, bruising the physician and another occupant. The two occupants of the other car were not injured.

* * *

In White Bear, Dr. A. L. Wurdemann, formerly of East Orange, New Jersey, has opened offices for the general practice of medicine. Dr. Wurdemann, a graduate of the University of Iowa, served her internship at East Orange General Hospital in New Jersey and later became associated in an obstetrics and gynecology practice in East Orange.

* * *

Rochester physicians who presented papers at the annual session of the Michigan State Medical Society, at Grand Rapids, September 23 to 26, included Dr. S. W. Harrington, Dr. W. E. Herrell, and Dr. Paul A. O'Leary. Dr. Harrington spoke on "Surgical Treatment of Carcinoma of the Breast," Dr. Herrell on "The Present Status of Sulfonamide and Antibiotic Therapy," and Dr. O'Leary on "The Use of Penicillin in the Treatment of Syphilis in General Practice."

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Word has been received that Dr. Donald T. Anderson, former Red Wing resident now on the staff of the Veterans Hospital in St. Cloud, has been promoted to the rank of captain in the U. S. Army Medical Corps.

* * *

An annual fall chest clinic was held in Faribault on September 22, at which time Dr. Karl H. Pfuetze, superintendent of Mineral Springs Sanatorium, interviewed former patients of the sanatorium and administered free Mantoux tests to all interested residents of the area as part of the campaign against tuberculosis.

* * *

Newly appointed to the staff of the University of Minnesota pediatrics department as an associate professor is Dr. Charles D. May, formerly of Boston. Graduated from Harvard University Medical School in 1935, Dr. May was director of the outpatient department at the Children's Hospital in Boston when he accepted the Minnesota appointment.

* * *

Dr. Charles D. Freeman, Jr., has opened offices at 1160 Lowry Medical Arts Building, Saint Paul, for the practice of dermatology and syphilology. After graduating from the University of Minnesota Medical School in 1942, Dr. Freeman spent three and a half years in the army medical corps in Puerto Rico, in Kentucky, and on the European front.

* * *

Dr. Erling G. Hestenes, resident physician at St. John's Hospital, Saint Paul, has accepted a call to establish a medical mission and public health service in Africa. Recently discharged from the army, Dr. Hestenes will assume his new duties early next year. It will be the first time that an American physician has been permitted to practice in British South Africa.

* * *

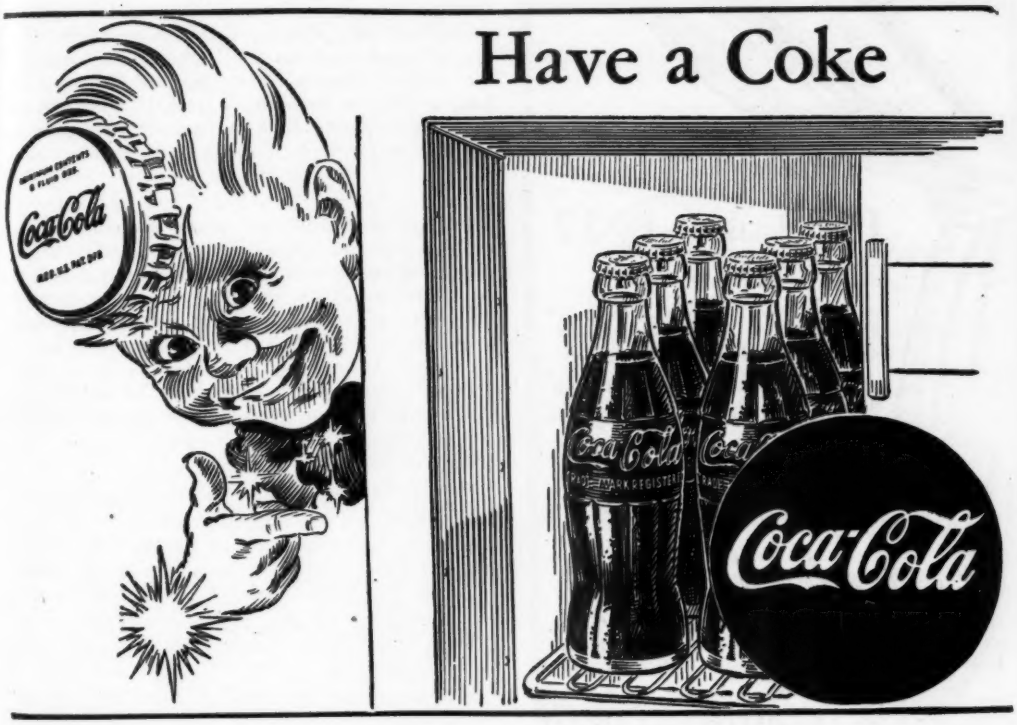
Dr. Charles W. Fogarty, Jr., has opened offices at 1019-1021 Lowry Medical Arts Building, Saint Paul, for the practice of internal medicine, with special emphasis on arthritis and allied rheumatic disorders and peripheral vascular diseases. Dr. Fogarty was a member of the class of 1938 of the University of Minnesota Medical School. He has since spent four years at the Mayo Clinic and four years in the army.

* * *

After practicing in Lakeville since January, Dr. Paul A. Wagner closed his office on September 15 and left for Portland, Oregon, to complete his war-interrupted postgraduate training in a hospital there. A graduate of the University of Minnesota, Dr. Wagner served for three years in the army, stationed in Burma for part of the time. Following his discharge, he opened practice in Lakeville.

* * *

The Dearholt Medal for distinguished service in combating tuberculosis has been awarded to Dr. S. A. Slater, superintendent of the Southwestern Minnesota Tuberculosis Sanatorium. The medal, named for the late Dr. Roy Dearholt of Milwaukee, pioneer tuberculosis fighter, was presented to Dr. Slater at a recent dinner meeting of the Mississippi Conference on Tuberculosis.



Under the leadership of Dr. J. W. Duncan, a committee in Moorhead is staging a county-wide drive to raise funds for the building of the Mayo Memorial medical center at the University of Minnesota. Plans are to establish a quota and work out a method for covering the entire county during the drive. In Moorhead the aid of local service organizations is being enlisted to cover the city.

* * *

Dr. John J. Bittner, University of Minnesota cancer research head and president of the American Association for Cancer Research, was a member of the nine-man United States delegation to the Fourth International Cancer Research Conference held in St. Louis, Missouri, September 2 to 7. About 200 scientists from more than thirty countries attended the conference, the first since the war ended.

* * *

The Southern Minnesota Spastic Club had Dr. John F. Pohl of Minneapolis as its guest speaker at a meeting held in Mankato on September 19. Dr. Pohl, who is attending orthopedic surgeon for the Michael Dowling School for Crippled Children, medical supervisor for the Elizabeth Kenny Institute, and a member of the medical advisory committee of the Minnesota Society for Crippled Children, discussed problems in the care and rehabilitation of cerebral palsied children.

* * *

Formerly of Minneapolis, Dr. Theodore Rasmussen has been appointed professor of neural surgery at the University of Chicago. A graduate of the University of Minnesota Medical School and a former fellow in the Mayo Foundation, Dr. Rasmussen has been doing neurosurgical work at the Montreal Neurological Institute for the past several years. During the war he was neural surgeon for the Fourteenth Evacuation Hospital in Burma.

* * *

On September 16, Dr. Donald W. Hastings, professor and head of the department of neuropsychiatry at the University of Minnesota, spoke at a meeting held in the Fort Snelling armory by the 110th General Hospital Organized Army Reserve.

A colonel in the Army medical reserve, Dr. Hastings discussed problems of military personnel in regard to neuropsychiatric fitness. Dr. Hastings is a member of a national ten-man commission studying that topic.

* * *

Dr. Curtis J. Lund, associate professor of obstetrics and gynecology at the University of Minnesota Medical School since 1943, has become head of the University of Louisiana's department of obstetrics and gynecology at New Orleans.

Dr. Lund, who received his medical degree at the University of Wisconsin in 1935, has been engaged in research work at the University of Minnesota and, previously, at the University of Wisconsin.

* * *

Dr. Elliot C. Cutler, Moseley Professor of Surgery at Harvard and surgeon-in-chief at the Peter Bent

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Brigham Hospital in Boston, died at his home on August 16, 1947. During World War II, Dr. Cutler was a brigadier general in the Medical Department of the Army, serving as chief consultant in surgery and later as chief of professional services in the Office of the Chief Surgeon, European Theater of Operations. He was an honorary consultant to the Army Medical Library.

* * *

Washington County will be one of the first areas in Minnesota, after the Twin Cities, to have a mass chest x-ray survey conducted, it was recently announced. No definite dates for the survey have yet been set, but it is expected that the program will get under way early in the fall of 1948. Funds to finance the survey will come partly from the sale of Christmas seals and partly from money raised by popular subscription in the county. Chairman of the survey is Roy Sakrison of Bayport.

* * *

Included in the new advisory board of the Diagnostic Clinic for Rheumatic Fever in the Wilder dispensary, Saint Paul, are Dr. Thomas E. Broadie, Dr. R. B. J. Schoch, Dr. George W. Snyder, Dr. Edward L. Strem, Dr. Robert Rosenthal, Dr. Harold Flanagan, Dr. James N. Dunn, and Dr. Paul F. Dwan.

Dr. Evelyn Harris is medical director of the clinic, which is sponsored by the Saint Paul section of the National Council of Jewish Women. Any Saint Paul child up to the age of eighteen years is eligible for the clinic's services.

* * *

Dr. Donald E. Hoaganson, a former Bemidji resident who has been practicing with Dr. H. R. Tregilgas in Saint Paul, recently moved back to Bemidji and became associated with Dr. Charles W. Vandersluis of that city.

A graduate of the University of Minnesota Medical School in 1944, Dr. Hoaganson served his internship at St. Joseph's Hospital in Saint Paul before entering the armed services. Following his discharge from the army in March, 1947, he joined Dr. Tregilgas in Saint Paul.

* * *

Formal recognition for his contributions to medicine and public health has been given to Dr. William A. O'Brien, director of postgraduate medical education at the University of Minnesota, by the House of Delegates of the Minnesota State Medical Association. A resolution recently passed by the House of Delegates commented on Dr. O'Brien's radio health broadcasts, and read in part: "Resolved that this House express its deep appreciation and thanks to Dr. O'Brien for the unique contribution he has made through his work to medicine and the public health in Minnesota."

* * *

Dr. Richard Virnig, who was released from naval service in June, has joined his brother, Dr. Mark P. Virnig, in medical practice in Wells.

The brothers are having the first floor of a building in Wells remodeled into a fourteen-room office suite.

The new offices will include waiting room, recovery and physiotherapy room, two private offices with adjoining treatment rooms, x-ray room, darkroom, laboratory, secretary's office, and a minor surgery room.

Dr. Richard Virnig is a graduate of the University of Minnesota. He interned at the Naval Hospital in Philadelphia and then served for five years in the navy. He was discharged on June 25.

* * *

A new member of the Marshall Medical Center is Dr. P. C. Hedenstrom, formerly at Bethesda Hospital in Saint Paul. The staff of the Marshall clinic is now comprised of Dr. W. W. Yaeger, Dr. J. E. Murphy and Dr. Hedenstrom.

* * *

Following a flood in Hibbing in the week of September 7, Dr. Carlyle Tingdale, local health officer, stated that citizens who had been exposed to insanitary sewer conditions should consult their local physicians in regard to typhoid innoculations. In his newspaper message, Dr. Tingdale said that there was no imminent danger but that the preventive health measure should be observed.

* * *

Dr. Clifford G. Grulee, Jr., an instructor in pediatrics at the University of Minnesota since 1946, has accepted a position as assistant professor of pediatrics at the University of Texas, Galveston. Dr. Theodore G. Panos, head resident physician in pediatrics at the University of Minnesota, will also move to Galveston to become an instructor in pediatrics at the University of Texas. He has been at Minnesota since 1945.

Both Dr. Grulee and Dr. Panos will be associated with Dr. Arild E. Hansen, head of the pediatrics department at the University of Texas, who was formerly an associate professor of pediatrics at the University of Minnesota.

* * *

After five years of medical practice at Erskine, Dr. J. H. Cameron has joined the staff of the Northwestern Clinic at Crookston, where he will be associated with Dr. C. L. Oppegaard in the Eye, Ear, Nose and Throat Department.

A graduate of the University of Saskatchewan and McGill University of Surgery at Montreal, Dr. Cameron took postgraduate work in surgery at California Hospital in Los Angeles and at New York Polyclinic Hospital. Before opening his practice at Erskine in 1942, he practiced in Bagley for four years. Dr. Cameron is a past president of the Red River Valley Medical Society.

* * *

Approved residencies in internal medicine and general surgery will soon be available at the Veterans Administration Center, Dayton, Ohio, it was recently announced. The residency training program is being conducted under the auspices of the University of Cincinnati College of Medicine and will follow the pattern of residencies in the Cincinnati General Hospital. There are 1,004 general medical and surgical beds at the VA institution and 2,500 domiciliary beds. Application for residency should be made to Dr. D. E.

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* * *

For two weeks in September Dr. Ira O. Wallin, Saint Paul, conducted the practice of Dr. W. J. Lund in Staples while Dr. Lund was a patient in the Northern Pacific Hospital in Saint Paul.

* * *

On August 23, Dr. Linus F. Leitschuh, a former resident of Minneapolis, was married to Miss Helen Patricia Carroll in Portland, Oregon, where Dr. Leitschuh is on the staff of Providence Hospital. A graduate of the University of Minnesota in 1937, Dr. Leitschuh was at Minneapolis General Hospital for three years, after which he practiced at Red Lake Falls for one year. He then served in the army for five years. After January 1, 1948, he will be established in an obstetrics and gynecology residency at St. Mary's Hospital, Minneapolis.

* * *

Two talks on tuberculosis were given by Dr. Kathleen Jordan, Granite Falls, at meetings held in Virginia and Ely on September 23. In the afternoon, Dr. Jordan, whose husband is Dr. Lewis S. Jordan, superintendent of Riverside Sanatorium in Granite Falls, addressed a gathering of school superintendents, physicians and nurses in Virginia, leading a discussion on Mantoux testing in schools of the area. Dr. Mario Fischer, Duluth city health director, presided at the meeting. In Ely, at a dinner meeting that evening, Dr. Jordan spoke on "The Eradication of Tuberculosis."

Both meetings were part of the anti-tuberculosis program being conducted by the St. Louis County Tuberculosis and Health Association.

* * *

Announcement has been made that Dr. Milton D. Starekow, for the past six years associated with the Lynde Clinic in Thief River Falls, has purchased the clinic from Dr. O. G. Lynde, and that Dr. Frank Fraser, formerly on the staff of St. Vincent's Hospital in New York, has become associated with Dr. Starekow in the practice of medicine and surgery.

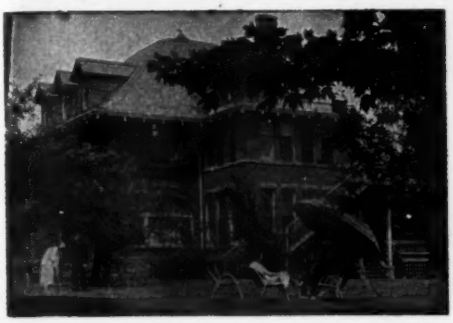
A graduate of the Medical College of New York University, Dr. Fraser served his internship and a surgery residency at St. Vincent's Hospital, New York. He then studied surgery for eighteen months under Dr. L. K. Ferguson in Philadelphia. During the war Dr. Fraser served in the navy for three and one-half years.

* * *

For his aid in planning medical evacuations during the Normandy invasion, Dr. Einar C. Andreassen, chief of medical service for the Veterans administration branch at Fort Snelling, has been awarded the Order of the British Empire by the king of England.

Dr. Andreassen, who was chief of medical operation for the U. S. Army in southern England during the war, will go to Washington to receive the award from the British ambassador.

Dr. Andreassen, a graduate of the University of Minnesota in 1917, was a Navy lieutenant during



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World War I. After six years in China as a doctor with the Lutheran Board of Missions, he set up practice in Minneapolis. He was called to active military duty with the Minnesota National Guard in 1941.

* * *

Honorary fellowship in the American Medical Association has been granted Dr. C. P. Robbins, Winona, who is now in his fifty-fourth year of medical practice.

Dr. Robbins, a graduate of Jefferson Medical College in Philadelphia in 1894, first opened his medical practice in Winona in 1896 after a year in Los Angeles and a year of postgraduate surgical study in New York. During his years in Winona he twice traveled to Europe for a year of study in Vienna, Berlin and London. In his earlier years of practice he was a steady contributor to several medical journals.

Dr. Robbins has been the official Winona County physician for ten years. He is a life member of the Winona County Medical Society and an honorary life member of the Minnesota State Medical Association.

* * *

As a one-man commission for the Rockefeller Foundation, Dr. Irvine McQuarrie, head of the pediatrics department of the University of Minnesota Medical School, left for Japan on September 16 to conduct a three-month survey of medical education and practice.

Dr.McQuarrie will visit twenty-seven Japanese medical schools, inspecting laboratory facilities, clinics, libraries and hospitals. His report will aid the Rockefeller Foundation in determining its future support of Japanese medical training. Dr. McQuarrie also will be a special consultant to General MacArthur on medical education.

During his absence, Dr. John M. Adams, associate professor, will be acting head of the pediatrics department.

* * *

Ten orthopedic clinics are being conducted throughout the state this fall by the State Division of Social Welfare.

The clinics include examinations by orthopedic surgeons, diagnosis and recommendation for treatment, consultation with the patient's physician, and vocational advice for children more than sixteen years old. The service is made possible by state and federal funds and is part of the crippled children's service of the welfare division.

Each clinic conducted in the state serves several different counties in the area surrounding the site of the clinic. Cities at which clinics are being conducted are the following: Winona, Fergus Falls, Bemidji, Virginia, Cambridge, Little Falls, Mankato, Crookston, Willmar, and Marshall.

Organizations co-operating in the program are the Minnesota-Dakota Orthopedic Society, Northwestern Pediatric Society, Gillette State Hospital for Crippled

Children, Division of Vocational Rehabilitation, Minnesota Public Health Association, and the Minnesota State Medical Association.

* * *

Twice within the past year an International Falls eye, ear, nose and throat specialist has had the unusual task (for his geographic area) of removing a filaria parasite from the eye of a patient.

The patient, an ex-missionary, contracted filariasis between 1925 and 1932 while living in the Belgian Congo. Not until several years after her return to the United States did she become aware of the infection. At that time a California physician removed a filaria parasite from one eye. A year ago, while living in International Falls, she again noticed a "wriggling sensation" in her left eye. Her local physician removed an inch-long parasite from the superficial tissues of her eyeball. In August of this year, she again experienced the same symptom, and for the second time the International Falls physician hooked out a filaria parasite, this one 22 millimeters long and embedded in the lower lid of her left eye.

* * *

Fifty-nine years of medical practice lie behind Dr. Ward Z. Flowers, Gibbon, who has at last retired in the community he served for three decades.

After graduating from the University of Illinois School of Medicine in 1886, Dr. Flowers came to Minnesota for a brief visit with his sister in Sibley County. His love of hunting was so satisfied by the abundant wild life in that area that he decided to stay and practice medicine for one year. After twelve months in Gibbon, he gave up plans to study in Germany and decided to make Gibbon his home. The hunting was too good to leave.

Hunting has always been Dr. Flowers' favorite recreation. From 1896 until 1940 he never missed an open season for deer in the United States and Canada. Though less active now at the age of eighty-six, he still keeps his guns free from rust for each fall season.

Dr. Flowers practiced in Gibbon for thirty-three years, and then moved to Minneapolis for another twenty years of professional work. When his wife died in 1940, he returned to Gibbon, reopened his practice, and served the community until 1946. During the past summer, while Gibbon was without a resident physician, Dr. Flowers was still on call for emergency cases.

* * *

Attorney General J. A. A. Burnquist on September 5 ruled that a school board has power to abolish the position of school physician but it has no authority to contract with a hospital to furnish professional services of a physician.

The legal question came up when a school board in St. Louis County employed a school physician for the year 1946-47, then in August abolished the position and made a contract with a local hospital to furnish physicians to serve the school. The physician whose position was abolished claimed veterans preference right to employment and contended his contract was still in force.

"It was for the school board to decide whether it would have a school physician," stated Burnquist. "It decided to have one for the year 1946-47. The board had the power to continue or discontinue the employment. When the board abolished the position, it determined a policy."

In regard to the hospital contract, however, the attorney general emphasized that "a hospital is not a person and is not licensed to practice medicine." He went on, "I fail to understand how in the case under consideration a hospital can assume to furnish the services which the law contemplates will be performed by physicians. In other words, the hospital cannot practice medicine."

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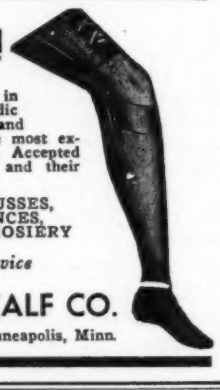

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The attorney general then ruled: "So far as the board attempted to contract with a hospital to furnish the professional services of a physician, it is my opinion that the contract was without effect and, in fact, was not a contract."

* * *

DR. M. A. BURNS HONORED

Dr. M. A. Burns of Milan was the guest of honor at festivities held at the Kviteseid Lutheran Church at Milan, Minnesota, on September 14, 1947. Friends and townsfolk gathered in large numbers to celebrate approximately fifty years of faithful and conscientious service contributed by Dr. Burns to the community.

The idea of the appreciation day festival for the doctor originated among his friends and was carried out by action of the Milan Commercial Club.

The program started at 2:30 p.m. with Rev. Frank M. Salveson as master of ceremonies. Rev. R. R. Syrdal, Madison, former pastor at Milan, pronounced the invocation. This was followed by a song by the Gay Nineties Quartette of Montevideo. Dr. William A. O'Brien, Minneapolis, delivered an address, dwelling on some of the great advances made in the science of medicine during the past fifty years.

Dr. Leon G. Smith, Montevideo, told how he and Dr. Burns have been working pleasantly together in the practice of their profession. He also presented the guest of honor with a pin awarded by the Minnesota State Medical Association for fifty years of medical practice. Miss Solveig Anderson brought a greeting from the Milan school in appreciation of the many years Dr. Burns has served as a member of the local board of education.

The Rev. Mr. Salveson read a paper written by Dr. Arnold Anderson of St. Petersburg, Florida, but formerly of Milan, telling of many interesting incidents of the early days in Milan.

A gift in the form of a gold watch was then presented by the Rev. Mr. Salveson to the honored guest. It bore the inscription: "Dr. M. A. Burns, 50 Years of Faithful Service, 1898-1948, Milan Community."

After Dr. Burns had expressed his appreciation of the honors shown him, refreshments were served in the church parlor. In passing down the line to greet the guest of honor, each person deposited a gift of money in a large bowl which, with its contents, was later presented to Dr. Burns.

It was generally agreed that the celebration was a great success from beginning to end, and served its purpose of expressing the appreciation of the community to Dr. Burns.

* * *

AMERICAN CONGRESS OF PHYSICAL MEDICINE

Physical medicine stepped into the spotlight on September 2 when the American Congress of Physical Medicine opened its twenty-fifth annual meeting in the Radisson Hotel in Minneapolis. An estimated 500 spe-

cialists in physical medicine attended the five-day session which extended through September 6.

On the first day of the meeting a prediction was made by Dr. Max Newman, head of the physical medicine section at Wayne University, Detroit, that within the next ten years even small general hospitals in the United States will expand to include physical and occupational therapy departments. The new president of the organization, Dr. H. Worley Kendall of the University of Illinois, pointed out the great strides that physical medicine has been making in the rehabilitation of war veterans and in the return to productivity of persons injured in industry. "Physical medicine has become one of the vital agents in keeping American production in high gear," he stated.

Among the mechanical devices exhibited at the meeting was an electrical apparatus developed by Dr. Donald L. Rose, University of Kansas, and Dr. Sedgwick Mead, Massachusetts General Hospital, that measures the level of a patient's ability to withstand pain. It is hoped that the device will lead to research which will produce apparatus to stimulate muscles without pain or discomfort of any kind.

Dr. Allan Hemingway, University of Minnesota, demonstrated to the group the value of an oximeter in the treatment of poliomyelitis, while the essentials of atom smashing and the development of radioactive elements were displayed by Dr. Frederic T. Jung of the AMA Council on Physical Medicine.

Artificially induced fever was shown to be of some value in the treatment of chronic rheumatoid arthritis by three Mayo Clinic physicians, Dr. Frank H. Krusen, Dr. K. G. Wakim, and Dr. E. C. Elkins. Physical exercise, started while tuberculosis patients are still confined to bed, was advocated by Dr. Edwin R. Levine of Michael Reese Hospital, Chicago.

The importance of games and exercise in the treatment of mental disease was emphasized by Dr. J. E. Davis, Veterans Administration chief of corrective physical rehabilitation, who cited numerous examples to show that the proper use of games and exercise helps restore mental balance by developing confidence in the patient or respect for his fellow men.

At the annual dinner of the organization on the evening of September 4, the gold key award of the Congress was presented to Dr. A. C. Ivy, physiology professor and vice president, University of Illinois; to Major General Norman T. Kirk, former surgeon general of the army, and to Lord Thomas Horder, president of the British Association of Physical Medicine. Dr. Ivy was the only one of the three present to receive the citation.

Dr. O. Leonard Huddleston, Los Angeles, was named president-elect of the Congress, and Dr. Earl C. Elkins, Rochester, was elected first vice president.

HOSPITAL NEWS

The American College of Hospital Administrators named Ray Amberg, Rosetown, second vice president of the organization at a convention held September 22 in St. Louis. Mr. Amberg is superintendent of the University of Minnesota Hospitals.

* * *

While in Minneapolis in August, Dr. Paul R. Hawley, chief medical director of the Veterans Administration, stated that the proposed $6,000,000 addition to the Fort Snelling Veterans Hospital will make the institution one of the most modern medical centers in the nation. He said that the hospital already is "one of the outstanding plants of the world," including private hospitals, and that much of the credit for the rating must go to the University of Minnesota for placing its medical resources behind the hospital.

The new addition will be a centrally placed structure connected to the other buildings in a spoke-like arrangement. It will house surgery and clinical departments and will allow the addition of 300 beds, to give the hospital a total of 1,100 beds.

* * *

One of the speakers at the forty-ninth annual convention of the American Hospital Association, held in St. Louis, September 22 to 25, was Dr. Victor Johnson, director-elect of the Mayo Foundation for Medical Education and Research. Dr. Johnson spoke on "Medical Education in the Tax-supported Hospital."

* * *

Rising hospital expenses were explained to the Minneapolis public on September 4 by Dr. William A. O'Brien, chairman of the Minnesota Hospital Association's Council on Public Education, who pointed out that

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the hospitals are continually trying to find ways to cut costs while still maintaining high standards of service.

Dr. O'Brien described a ten-year cost study at an "average" hospital which showed that most expenses have more than doubled in the last decade.

"In 1938 the cost of operating this hospital was $6,400 a month," he said, "while today it is $13,730. Nursing service has increased from $1,750 a month in 1938 to $6,312 in 1947, dietary service from $1,087 to $2,768, laundry from $450 to $750, housekeeping from $390 to $824, administration from $904 to $1,598, and plant maintenance from $1,123 to $1,384 per month. Likewise, the hospital's payroll in 1938 amounted to $4,841 a month for sixty-five employes, but today totals $17,700 for 125 employes."

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BOOK REVIEWS

Books listed here become the property of the Ramsey, Hennepin and St. Louis County Medical Libraries when reviewed. Members, however, are urged to write reviews of any or every recent book which may be of interest to physicians.

INFANT NUTRITION. Fourth Edition. A Textbook of Infant Feeding, for Students and Practitioners of Medicine. P. C. Jeans, A.M., M.D., Professor of Pediatrics, College of Medicine, State University of Iowa; and Williams McKim Marriott, B.S., M.D., late Professor of Pediatrics, Washington University School of Medicine; Physician in Chief, St. Louis Children's Hospital. 516 pages. Illus. Price, $6.50, cloth. St. Louis: C. V. Mosby Co., 1947.

OFFICE TREATMENT OF THE EYE. Elias Selinger, M.D., Attending ophthalmologist Mount Sinai, Cook County and Michael Reese Hospitals. 542 pages. Illus. Price, $7.75, cloth. Chicago: Year Book Publishers, 1947.

SYNOPSIS OF ALLERGY. Second Edition. Harry L. Alexander, A.B., M.D., Professor of Clinical Medicine, Washington University School of Medicine, St. Louis; editor of *Journal of Allergy*. 255 pages. Illus. Price $3.50, cloth. St. Louis: C. V. Mosby Co., 1947.

COMMUNICABLE DISEASES. Second Edition. Franklin H. Top, A.B., M.D., M.P.H., F.A.C.P., Medical Director Herman Kiefer Hospital, Clinical Professor of Preventive Medicine and Public Health, Wayne University College of Medicine, etc. 922 pages. Illus. Price $8.50, cloth. St. Louis: C. V. Mosby Co., 1947.

A HISTORY OF THE AMERICAN MEDICAL ASSOCIATION, 1847 to 1947. Morris Fishbein, M.D. 1226 pages. Illus. Price $10.00, cloth. Philadelphia: W. B. Saunders Co., 1947.

SYNOPSIS OF OBSTETRICS. Third Edition. Jennings C. Litzenberg, B.Sc., M.D., F.A.C.S., Professor Emeritus of Obstetrics and Gynecology, University of Minnesota Medical School, Minneapolis. 416 pages. Illus. Price $5.50, cloth. St. Louis: C. V. Mosby Co., 1947.

RYPINS' MEDICAL LICENSURE EXAMINATIONS. Sixth Edition. Topical Summaries, questions and answers. Walter L. Bierring, M. D., F.A.C.P., M.R.C.P. Edin. (Hon.), editor. 690 pages. Price $6.00, cloth. Philadelphia: J. B. Lippincott Co., 1947.

FUNDAMENTALS OF PSYCHIATRY. Fourth Edition. Edward A. Strecher, M.D., Sc.D., LL.D., Litt.D., F.A.C.P., Professor of Psychiatry and Chairman of Department, Undergraduate and Graduate Schools of Medicine, University of Medicine, University of Pennsylvania; psychiatrist to Pennsylvania, Philadelphia and Germantown Hospitals, etc. 325 pages. Illus. Price $4.00, cloth. Philadelphia: J. B. Lippincott Co., 1947.

THE HOSPITAL ACT AND YOUR COMMUNITY. U. S. Public Health Service, Division of Hospital Facilities. Washington 25, D. C.: Government Printing Office, 1947. Single copies, Free. Quantities to 100 copies, 10c each; 100 or more, $7.50 per hundred.

For those interested in the hospital program, authorized last year by the Hospital Survey and Construction Act, this booklet tells in simple terms what the Act means to the individual, the community and the State. It should be especially valuable to any group or community that wants to build a hospital but does not know how to go about getting Federal aid for construction. Single copies are available free on request to the U. S. Public Health Service, Washington 25, D. C. Larger quantities may be purchased at 10 cents a copy of $7.50 per hundred from the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

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